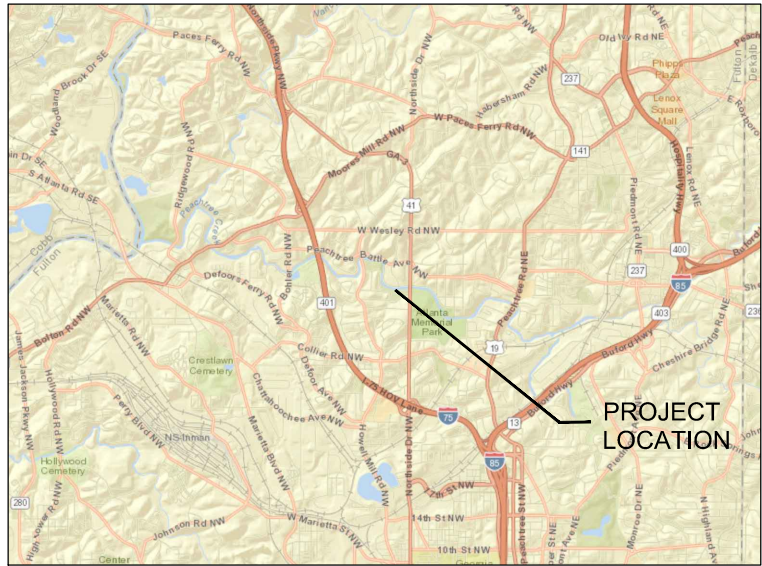


CITY OF ATLANTA
DEPARTMENT OF WATERSHED MANAGEMENT
OFFICE OF ENGINEERING SERVICES

CITY OF ATLANTA
KEISHA LANCE BOTTOMS
MAYOR



LOCATION MAP

PROJECT DESCRIPTION:
WOODWARD WAY IS A SANITARY SEWER INSTALLATION PROJECT IN ATLANTA, GA ALONG WOODWARD WAY NW THAT IS INTENDED TO RELIEVE SURCHARGING AND PROVIDE ADDITIONAL CAPACITY IN THE EXISTING SEWER NETWORK. THIS WILL BE ACCOMPLISHED BY INSTALLING 2,000 LF OF NEW 8-INCH DUCTILE IRON GRAVITY SEWER LINE VIA OPEN TRENCH METHODS AND CONSTRUCTION OF A NEW PUMP STATION. INCLUDED IN THIS PROJECT IS THE REMOVAL OF AN AERIAL SEWER CROSSING AND ITS PIERS ACROSS PEACHTREE CREEK.

EROSION NOTE:
EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) WILL BE EMPLOYED AND ENFORCED PURSUANT TO AN EROSION AND SEDIMENT CONTROL PLAN PREPARED BY A GEORGIA SOIL AND WATER CONSERVATION COMMISSION LEVEL-2 DESIGN PROFESSIONAL. **PRIOR TO LAND-DISTURBING ACTIVITIES, THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE AREA EROSION CONTROL INSPECTOR. CALL (404) 546-1300 TO CONTACT THE INSPECTOR.**



CONSTRUCTION PLANS
FOR
WOODWARD WAY SEWER IMPROVEMENTS
100% REVIEW DOCUMENTS
AUGUST 31, 2017

DEPARTMENT OF WATERSHED MANAGEMENT
KISHIA L. POWELL
COMMISSIONER

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REVISIONS	
DATE	DESCRIPTION
ENGINEER OF RECORD	

GENERAL NOTES:

1. THE EXISTING UTILITIES SHOWN ON THE CONTRACT DRAWINGS ARE APPROXIMATE. UTILITIES SHOWN ON THESE DRAWINGS HAVE BEEN COMPILED FROM INFORMATION FURNISHED BY THE UTILITY OWNERS AND BY SURVEY. ACCURACY AND COMPLETENESS ARE NOT GUARANTEED. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES HAVING UTILITIES WITHIN OR ADJACENT TO THE WORK AREA AND FOR COORDINATING ANY NECESSARY RELOCATIONS OR TIE-INS. UTILITIES SHOWN ARE APPROXIMATE. GEORGIA LAW REQUIRES THE CONTRACTOR TO NOTIFY THE UTILITIES PROTECTION CENTER MINIMUM 3 WORKING DAYS BUT NOT MORE THAN 10 DAYS BEFORE BEGINNING CONSTRUCTION. THIS NOTICE WILL REMAIN IN EFFECT FOR 30 WORKING DAYS FROM THE DATE UTILITIES PROTECTION CENTER IS NOTIFIED. IN THE ATLANTA AREA, THE CONTRACTOR IS TO CALL THE UTILITIES PROTECTION CENTER AT 770-623-4344.
2. CONTRACTOR SHALL RETAIN A LAND SURVEYOR REGISTERED IN THE STATE OF GEORGIA TO REPLACE ANY PROPERTY PINS REMOVED DURING CONSTRUCTION. A COPY OF THE FIELD NOTES SHOWING PINS RESET SHALL BE SENT TO NOLTON JOHNSON, DIRECTOR – OFFICE OF ENGINEERING SERVICES, WATERSHED MANAGEMENT, CITY OF ATLANTA, 72 MARIETTA ST, 5th FLOOR, ATLANTA GA. 30303-0330.
3. CONTRACTOR SHALL HAVE A CONFORMED SET OF PLANS AND SPECIFICATIONS ON THE JOB SITE DURING WORKING HOURS.
4. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE LATEST CITY OF ATLANTA STANDARDS.
5. SEWER DISTANCES SHOWN ON THE PROFILE DRAWINGS ARE FROM CENTER-TO-CENTER OF THE MANHOLE STRUCTURES AND ARE FOR LAYOUT PURPOSES ONLY. THE INVERTS SHOWN ARE THE THEORETICAL PIPE INVERTS AT THE CENTER OF THE STRUCTURE.
6. ALL PIPES ENTERING A MANHOLE WILL BE SEPARATED FROM THE MANHOLE WALL BY AN APPROVED MANUFACTURER'S BUTYL RUBBER GASKET WHICH COMPLETELY SURROUNDS THE PIPE, SEALS THE MANHOLE AND PERMITS DIFFERENTIAL MOVEMENT.
7. CLASS "B" PIPE BEDDING – IN ACCORDANCE WITH SECTION 02200 EARTHWORK, SHALL BE USED IN PUBLIC RIGHT-OF-WAY UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS. CLASS "C" PIPE BEDDING SHALL BE USED IN ALL OTHER AREAS UNLESS OTHERWISE NOTED ON THE CONTRACT DRAWINGS.
8. THE CONTRACTOR SHALL COORDINATE WORK WITH CITY OF ATLANTA. CONTRACTOR SHALL PROVIDE SUFFICIENT ADVANCE NOTICES OF PROPOSED WORK SCHEDULE AS DEFINED IN THE SPECIFICATIONS.
9. ALL AREAS DISTURBED AND DAMAGED BY THE CONTRACTOR, INCLUDING CURB AND GUTTER, AND TRENCH SETTLEMENT RELATED AREAS, SHALL BE RESTORED TO THE ORIGINAL CONDITIONS TO THE SATISFACTION OF THE CITY OF ATLANTA AND AT NO ADDITIONAL COST TO THE CITY.
10. CONTRACTOR SHALL INSTALL 6 FOOT HIGH TEMPORARY CHAIN LINK FENCE AROUND ALL WORK AREAS AND TO PROVIDE FOR TEMPORARY ENCLOSURE OF YARDS FOR SECURITY OF PETS, DOMESTIC ANIMALS, AND THE PROPERTY WHEN PERMANENT FENCES MUST BE REMOVED DUE TO CONSTRUCTION OF STORM OR SANITARY SEWER LINES.
11. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN EROSION AND SEDIMENT CONTROL DEVICES IN ACCORDANCE WITH "THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", LATEST EDITION.
12. THE CONTRACTOR SHALL REPLACE ALL FENCING DAMAGED BY CONSTRUCTION. FENCING SHALL BE REPLACED TO ORIGINAL SIZE, QUALITY AND CONDITION, AND TO THE APPROVAL OF THE CITY OF ATLANTA OR ITS AUTHORIZED REPRESENTATIVE.
13. PRIOR TO FINAL ACCEPTANCE OF WORK, CONTRACTOR SHALL PROVIDE "AS-BUILT" MARK-UP PLANS IN ACCORDANCE WITH PARAGRAPH GC-28.4 OF THE GENERAL CONDITIONS TO THE CITY OF ATLANTA ASSIGNED INSPECTOR FOR FINAL INSPECTION OF ALL NEWLY INSTALLED STORM AND SANITARY SEWERS AS WELL AS ELECTRONIC "AS-BUILT" TABLES PER SPECIFICATION SECTION 01720: RECORD DOCUMENTS. AFTER THE FINAL INSPECTION APPROVAL, CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS TO THE OFFICE OF ENGINEERING SERVICES, UTILITY DESIGN GROUP, PROJECT DESIGN ENGINEER AND ELECTRONIC "AS-BUILT" TABLES TO THE CITY'S CONSENT DECREE PROGRAM DESIGN MANAGER.
14. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS FROM THE CITY OF ATLANTA DEPARTMENT OF PUBLIC WORKS AND IF APPLICABLE, FROM THE GEORGIA DEPARTMENT OF TRANSPORTATION PRIOR TO ANY REQUIRED LANE CLOSURES.
15. INSTALLATION OF NEW STORM AND SANITARY SEWERS, INCLUDING TRENCH EXCAVATION, SHOULD BE FINISHED BY CLOSE OF DAY, OR ADEQUATELY COVERED FOR SAFETY.
16. CONTRACTOR SHALL INSTALL STEEL COVER PLATES TO PROTECT AREAS, INCLUDING DRIVEWAYS LEFT OPEN AT THE END OF EACH DAY'S WORK. CONTRACTOR SHALL MAINTAIN ACCESS TO DRIVEWAYS AND MAILBOXES AT ALL TIMES.
17. THE LENGTH OF PIPE FOR PAYMENT PURPOSE WILL BE CONSIDERED THE DISTANCE FROM THE CENTER OF MANHOLE TO CENTER OF MANHOLE, SUBTRACTED BY THE WIDTH OF THE MANHOLE.
18. CONTRACTOR SHALL ENTER UPON PRIVATE PROPERTY ONLY AFTER OBTAINING RIGHT OF ENTRY LETTER IN ACCORDANCE WITH PARAGRAPH GC-15 OF THE GENERAL CONDITIONS FROM THE CITY OF ATLANTA AND NOTIFYING HOMEOWNER IN ADVANCE.
19. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORTING ALL UTILITIES WITHIN THE EXCAVATION LIMITS DURING CONSTRUCTION.
20. CONTRACTOR SHALL LOCATE AND REFERENCE ALL WATER METERS AND VALVES WITHIN THE CONSTRUCTION LIMITS. THE REFERENCE POINTS SHALL BE LOCATED SO THAT THE REFERENCE WILL NOT BE DISTURBED AND THE LOCATION OF THE METERS AND VALVES CAN BE RE-ESTABLISHED. A PERMANENT WRITTEN RECORD OF THE REFERENCE POINTS WILL BE FURNISHED TO THE CITY OF ATLANTA. ACCESS TO FIRE HYDRANTS WILL BE MAINTAINED AT ALL TIMES.
21. ALL TRENCHING AND BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 02200 EARTHWORK, SECTION 02730 SEWERS AND ACCESSORIES, AND CITY OF ATLANTA DETAILS. TEMPORARY TRENCH EXCAVATION SHALL AT ALL TIMES CONFORM TO THE SAFETY REQUIREMENTS OF OSHA.
22. PLANIMETRIC AND TOPOGRAPHICAL FEATURES SHOWN ARE TAKEN FROM AN ACTUAL FIELD SURVEY PERFORMED BY LOWE ENGINEERS 990 HAMMOND DRIVE SUITE 900 ATLANTA, GA 30328. IT IS THE CONTRACTOR'S RESPONSIBILITY TO STAKEOUT ALL PROPOSED WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
23. AT COMPLETION OF SEWER AND WATER CONSTRUCTION SET ALL MANHOLES, VALVE BOXES, METERS, AND APPURTENANCES FOR PROPER FINAL GRADE. CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO THE ABOVE ITEMS UNTIL SYSTEM IS ACCEPTED BY THE CITY.
24. TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY FOR THE SOIL AS DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D-698 AND AASHTO T-99) RESULTS IN ACCORDANCE WITH SPECIFICATION SECTION 02200, EARTHWORK. BACKFILL MATERIAL SHALL BE FREE OF ROOTS, ROCKS AND OTHER DELETERIOUS MATTER.
25. ALL NEW MANHOLES ARE PROJECTED. CONTRACTOR MUST VERIFY SEWER ELEVATIONS AT APPROPRIATE LOCATIONS THROUGH VACUUM EXCAVATION.
26. CONTRACTOR SHALL FIELD VERIFY ALL INVERT ELEVATIONS, ANGLES, AND SERVICE STATUS.
27. MANHOLES WITHIN PUBLIC RIGHT-OF-WAY TO BE ABANDONED IN PLACE IN ACCORDANCE WITH ATLANTA SPECIFICATIONS.
28. ALL MANHOLES LOCATED BELOW THE 100 YR FLOOD ELEVATION SHALL HAVE WATERTIGHT FRAME AND COVERS UNLESS SHOWN OTHERWISE.

TRAFFIC NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING TRAFFIC CONTROL PLANS AND DETAILS TO THE AUTHORITY HAVING JURISDICTION INCLUDING, BUT NOT LIMITED TO THE CITY OF ATLANTA DIVISION OF TRAFFIC AND TRANSPORTATION IN ACCORDANCE WITH SECTION 01550 TRAFFIC REGULATION. TRAFFIC CONTROL PLANS SHALL BE PREPARED BY AND SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN STATE OF GEORGIA.
2. VEHICULAR AND PEDESTRIAN TRAFFIC IS TO BE MAINTAINED OVER THE EXISTING ROADWAYS AND INTO THE EXISTING DRIVEWAYS WITHIN THE LIMITS OF THE PROJECT AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE CITY OF ATLANTA DIVISION OF TRAFFIC AND TRANSPORTATION AND THE CITY OF ATLANTA POLICE DEPARTMENTS FOR TRAFFIC OPERATIONS AND PARKING PROHIBITIONS DURING CONSTRUCTION.
3. PROPERTY OWNERS AND OWNERS OF ADJOINING PROPERTIES SHALL BE GIVEN A WRITTEN NOTICE AT LEAST FIVE DAYS PRIOR TO THE BEGINNING OF ANY WORK WHICH INTERFERES WITH THE OWNER'S NORMAL PASSAGE.
4. THE CONTRACTOR SHALL OBTAIN LANE CLOSURE PERMITS IN ACCORDANCE WITH SECTION 01550 TRAFFIC REGULATION.
5. CONTRACTOR SHALL CONSULT THE CITY OF ATLANTA'S RIGHT-OF-WAY MANUAL FOR STREET DESIGNATIONS AND RESTRICTIONS FOR WORKING WITHIN THE CITY'S RIGHT-OF-WAY.
6. ALL MAINTENANCE AND PROTECTION OF TRAFFIC DEVICES SHALL CONFORM TO THE GEORGIA DEPARTMENT OF TRANSPORTATION REQUIREMENTS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
7. FINAL RESPONSIBILITY FOR THE INSTALLATION OF ADEQUATE PRECAUTIONS AND FOR THE MAINTENANCE AND PROTECTION OF THE TRAVELING PUBLIC AND HIS OWN PERSONNEL SHALL REST WITH THE CONTRACTOR.

LEGEND

DESCRIPTION	EXISTING	PROPOSED
RIGHT OF WAY		
LAND LOT LINE		
PROPERTY LINE		
CENTER LINE/BASE LINE		
EASEMENT (DRAINAGE, SANITARY)		
EASEMENT (TEMPORARY)		
DEMOLITION AREA		
FENCE		
EDGE OF PAVEMENT		
CENTER LINE OF SWALE/CREEK		
CONTOUR		
UNDERGROUND POWER		
OVERHEAD POWER		
UNDERGROUND TELEPHONE		
UNDERGROUND TV CABLE		
GAS LINE		
WATER LINE		
SANITARY SEWER LINE		
SANITARY SEWER LINE (REPLACE)		
SANITARY SEWER LINE (ABANDON)		
STORM DRAIN LINE		
GUY POLE		
UTILITY POLE (T=TELEPHONE, P=POWER, L=LIGHT)		
UNDERGROUND TELEPHONE BOX		
TELEPHONE MANHOLE		
METER BOX (W=WATER, G=GAS)		
CATCH BASIN		
DROP INLET		
HEADWALL		
CITY OF ATLANTA CONTROL POINT (DELTA POINT)		
PROPERTY MARKER (IPF=IRON PIN FOUND)		
RETAINING WALL		
CLEANOUT		
SIDEWALK		
CURB AND GUTTER		
SIGNIFICANT TREES		
BORING LOCATIONS		
WATER VALVE		
WATER METER		
FIRE HYDRANT		
SANITARY SEWER MANHOLE		
STORM DRAIN MANHOLE		

UTILITY COMPANIES

- A.G. ATLANTA GAS LIGHT COMPANY
- B.D.W. BUREAU OF DRINKING WATER
- G.P. GEORGIA POWER COMPANY
- CTV UNDERGROUND CABLE COMPANIES
- UT UNDERGROUND TELEPHONE COMPANIES

ABBREVIATIONS

ABAND	ABANDONED
APPROX	APPROXIMATE
BRK	BRICK
CB	CATCH BASIN
CC	CENTER TO CENTER
CIRCUM	CIRCUMFERENCE
CL	CLASS
CO	CLEAN OUT
CCTV	CLOSED CIRCUIT TELEVISION
COMB	COMBINED
CONC	CONCRETE
CP	CLAY PIPE
C	CONDUIT
CMP	CORRUGATED METAL PIPE
CULV	CULVERT
DIAG	DIAGONAL
DIA	DIAMETER
DIM	DIMENSION
DWG	DRAWING
DW	DRIVEWAY
DIP	DUCTILE IRON PIPE
DI	DROP INLET
E/P	EDGE OF PAVEMENT
EL	ELEVATION
EXIST	EXISTING
FH	FIRE HYDRANT
FM	FORCE MAIN
FT	FOOT OR FEET
G	GAS
GM	GAS METER
GV	GAS VALVE
HORIZ	HORIZONTAL
HE	HORIZONTAL ELLIPTICAL
IN	INCH
ID	INSIDE DIAMETER
INV	INVERT
LT	LEFT
LF	LINEAR FEET
LOC	LIMITS OF CONSTRUCTION
MH	MANHOLE
MAX	MAXIMUM
MIN	MINIMUM
NG	NATURAL GAS
NTS	NOT TO SCALE
NO	NUMBER
OD	OUTSIDE DIAMETER
P	PIPE
PC	PRESSURE CLASS
PL	PROPERTY LINE
PROP	PROPOSED
PS	PUMP STATION
RCP	REINFORCED CONCRETE PIPE
R	RADIUS
RQD	REQUIRED
REV	REVISED OR REVISION
RT	RIGHT
R/W	RIGHT-OF-WAY
SECT	SECTION
SPEC	SPECIFICATION (S)
STL	STEEL
SHT	SHEET
SD	STORM DRAIN SEWER
SS	SANITARY SEWER
ST	STREET
T	TELEPHONE
TYP	TYPICAL
UG	UNDERGROUND
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W	WATER
WM	WATER METER
WV	WATER VALVE

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REVISIONS

N.O.	DATE	DESCRIPTION

CITY OF ATLANTA

DEPARTMENT OF WATERSHED MANAGEMENT

OFFICE OF ENGINEERING SERVICES

WOODWARD WAY SEWER IMPROVEMENTS

GENERAL NOTES

SURVEYOR	FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE
DRAWN BY D CORBETT	DESIGNED BY J REYNOLDS	CHECKED BY A BYARD	APPROVED BY T KELLEY	DATE AUG 2017		

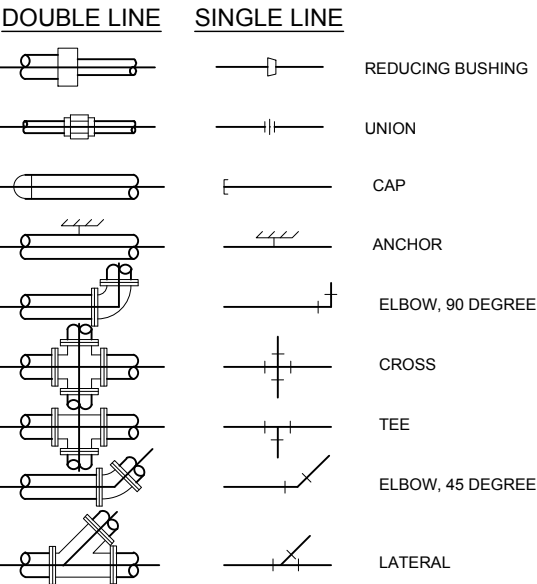
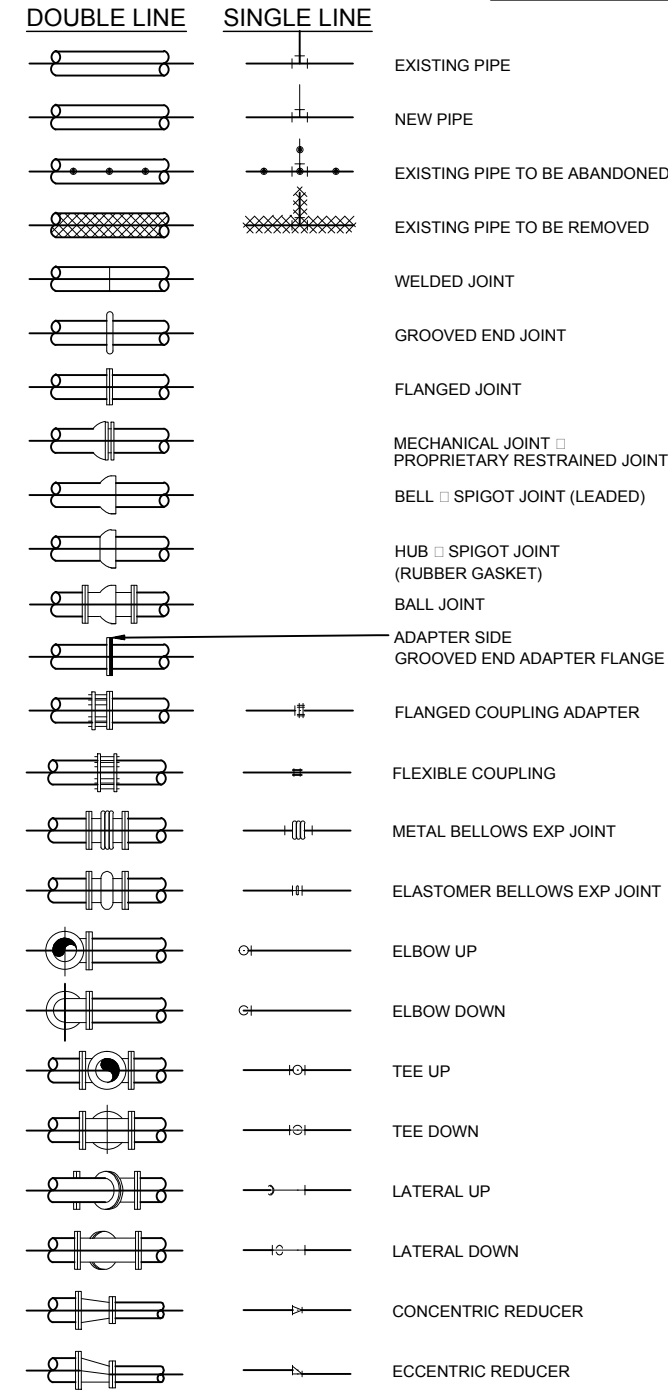
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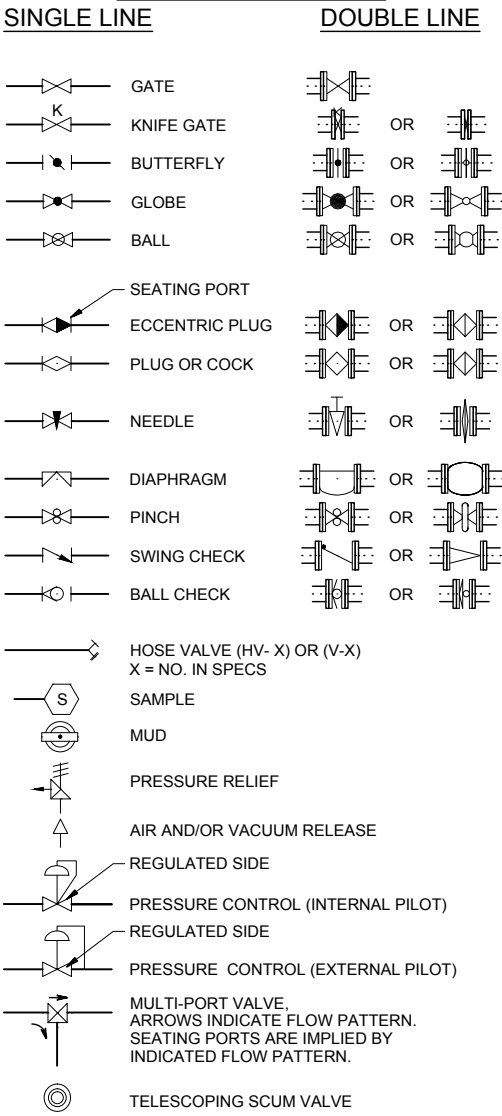
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PIPE AND FITTING SYMBOLS

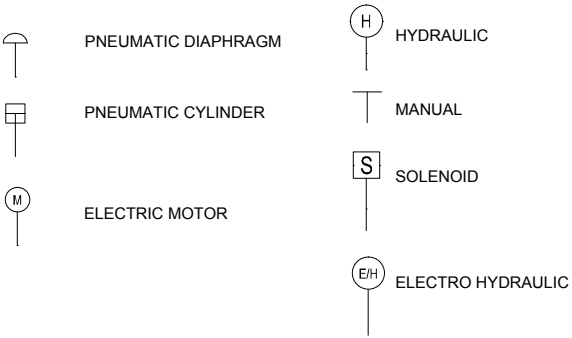


- NOTES:
- 1. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS.
 - 2. SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.
 - 3. EXISTING PIPE AND EQUIPMENT IS SHOWN LIGHT-LINED AND/OR SCREENED AND IS NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.

VALVE SYMBOLS



ACTUATOR SYMBOLS

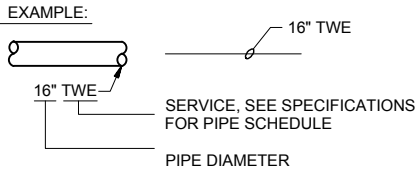


MECHANICAL LEGEND AND NOTES

GENERIC PIPING NOTES

- 1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
- 2. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
- 3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. CONTRACTOR SHALL DESIGN SUPPORTS AS SPECIFIED.
- 4. ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
- 5. ALL FLEXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
- 6. SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
- 7. ALL BURIED PIPING SPECIFIED TO BE PRESSURE TESTED, EXCEPT FLANGED, WELDED, OR SCREWED PIPING, SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED.
- 8. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
- 9. WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER.

PIPING DESIGNATION



ch2m | **ROH&FOX**
A KBR COMPANY

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REVISIONS

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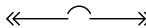

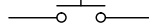

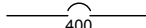
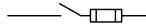
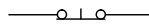

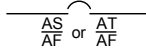
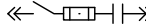
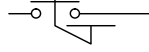


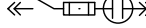
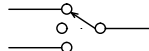


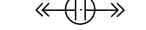


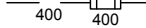


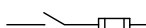
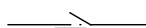
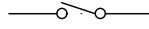

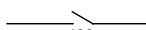

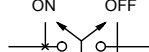

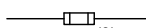









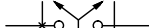

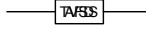

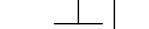


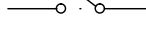



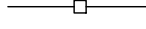


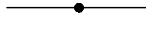
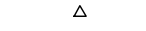


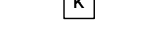



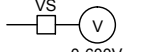
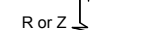
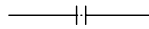


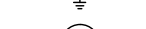
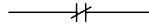


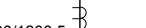
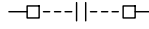


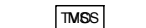


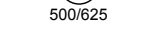
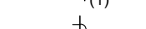


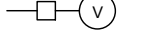
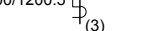




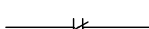
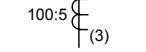

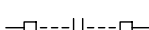


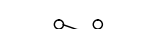

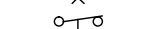

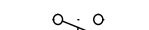

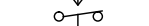

CITY OF ATLANTA
DEPARTMENT OF WATERSHED MANAGEMENT
OFFICE OF ENGINEERING SERVICES

WOODWARD WAY SEWER IMPROVEMENTS
MECHANICAL LEGEND

SURVEYOR	FIELD BOOKS	L.L.	DIST.	COUNTY	SCALE
DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY	FULTON	NTS
D CORBETT	J REYNOLDS	A BYARD	T KELLEY		
DATE					

PROJECT NUMBER: 3 SHEET OF 41

ENGINEER OF RECORD

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION																
ONE-LINE DIAGRAM-1		ONE-LINE DIAGRAM-2		CONTROL DIAGRAM-1		CONTROL DIAGRAM-2																	
	DRAWOUT AIR CIRCUIT BREAKER, LOW VOLTAGE		DRAWOUT POWER CIRCUIT BREAKER, MEDIUM VOLTAGE		PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN		CAPACITOR																
	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO		NON DRAWOUT FUSED SWITCH, MEDIUM VOLTAGE		PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED		BATTERY																
	CIRCUIT BREAKER, STATIC TRIP UNIT, SENSOR AMP TRIP AND FRAME RATINGS SHOWN, 3 POLE, UNO		DRAWOUT FUSED SWITCH AND CONTACTOR, MEDIUM VOLTAGE		PUSH BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK		LIMIT SWITCH, NORMALLY OPEN, CLOSSES AT END OF TRAVEL																
	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, TRIP RATING SHOWN, 3 POLE, UNO		DRAWOUT FUSED SWITCH AND VACUUM CONTACTOR, MEDIUM VOLTAGE		3 POSITION SELECTOR SWITCH MAINTAINED CONTACT		LIMIT SWITCH, NORMALLY CLOSED, OPENS AT END OF TRAVEL																
	CIRCUIT BREAKER WITH CURRENT LIMITING FUSES, TRIP AND FUSE RATING INDICATED, 3 POLE, UNO		DRAWOUT VACUUM CONTACTOR, MEDIUM VOLTAGE		SELECTOR SWITCH - MAINTAINED CONTACT - CHART IDENTIFIES OPERATION WHEN NEEDED FOR CLARITY:		TEMPERATURE SWITCH, OPENS ON TEMPERATURE RISE																
	FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE, UNO		MEDIUM VOLTAGE CABLE STRESS CONE TYPE TERMINATION, OPEN TERMINATOR OR ELBOW	<table border="1" data-bbox="1611 396 1880 461"><thead><tr><th></th><th colspan="3">POSITION</th></tr><tr><th>CKT</th><th>HAND</th><th>OFF</th><th>REMOTE</th></tr></thead><tbody><tr><td>1</td><td>X</td><td>O</td><td>O</td></tr><tr><td>2</td><td>O</td><td>O</td><td>X</td></tr></tbody></table>		POSITION			CKT	HAND	OFF	REMOTE	1	X	O	O	2	O	O	X	X - CLOSED CONTACT O - OPEN CONTACT		TEMPERATURE SWITCH, CLOSSES ON TEMPERATURE RISE
	POSITION																						
CKT	HAND	OFF	REMOTE																				
1	X	O	O																				
2	O	O	X																				
	SWITCH, CURRENT RATING INDICATED, 3 POLE, UNO		SWITCH - LOAD BREAK, GROUP OPERATED, MEDIUM VOLTAGE		TOGGLE SWITCH, ON-OFF TYPE		FLOAT SWITCH, NORMALLY OPEN, CLOSSES ON DESCENDING LEVEL																
	FUSE, CURRENT RATING AND QUANTITY INDICATED		SWITCH W/ARCING HORNS, MEDIUM VOLTAGE		SELECTOR SWITCH, ON-OFF TYPE		FLOAT SWITCH, NORMALLY OPEN, CLOSSES ON RISING LEVEL																
	MAGNETIC STARTER WITH OVERLOAD, NEMA SIZE INDICATED, FVNR UNO		DISCONNECTING FUSE - SOLID MATERIAL, MEDIUM VOLTAGE		MUSHROOM HEAD PUSHBUTTON SWITCH		PRESSURE SWITCH, NORMALLY CLOSED, OPENS ON RISING PRESSURE																
	ELECTRONIC STARTER/SPEED CONTROL RVSS = REDUCED VOLTAGE SOFT STARTER AFD = AC ADJUSTABLE FREQUENCY DRIVE DC = DC ADJUSTABLE SPEED DRIVE RVAT = REDUCED VOLTAGE AUTO TRANSFORMER TYPE RVRT = REDUCED VOLTAGE REACTOR TYPE		SWITCH - HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE		INDICATING LIGHT, PUSH-TO-TEST, LETTER INDICATES COLOR		PRESSURE SWITCH, NORMALLY OPEN, CLOSSES ON RISING PRESSURE																
	CABLE OR BUS CONNECTION POINT		FUSE - EXPULSION, HOOK STICK OPERATED, SINGLE POLE, MEDIUM VOLTAGE		INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN S - STROBE B - BLUE R - RED C - CLEAR W - WHITE		FLOW SWITCH, CLOSSES ON INCREASED FLOW																
	KEY INTERLOCK		GROUND SWITCH, GANG OPERATED		ELAPSED TIME METER		FLOW SWITCH, OPENS ON INCREASED FLOW																
	SURGE ARRESTER (GAP TYPE)		TERMINAL BLOCK LUG		MOTOR STARTER CONTACTOR COIL		NEUTRAL GROUND CURRENT LIMITING RESISTOR																
	CAPACITOR - KVAR INDICATED, 3 PHASE		DELTA CONNECTION		CONTROL RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT		CALIBRATING RESISTOR																
	AC MOTOR, SCHEIDT CAGE INDUCTION - HORSEPOWER INDICATED		WYE GROUNDED CONNECTION, SOLID GROUND		TIME DELAY RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT		TACHOMETER GENERATOR																
	GENERATOR, KW/KVA RATING SHOWN		WYE NEUTRAL GROUND RESISTOR OR IMPEDANCE CONNECTION		SOLENOID VALVE, X INDICATES NUMERICAL ORDER IN CIRCUIT		GROUND FAULT SENSOR																
	ANALOG METER WITH SWITCH - SCALE RANGE SHOWN V = VOLTAGE KW = KILOWATTS A = AMPERAGE KVAR = KILOVARS PF = POWER FACTOR		RELAY OR DEVICE, FUNCTION NUMBER AS INDICATED		CONTACT - NORMALLY OPEN		FLASHER																
	DIGITAL POWER METER (MULTIFUNCTION)		CURRENT TRANSFORMER, ZERO SEQUENCE, RATIO AND QUANTITY INDICATED		CONTACT - NORMALLY CLOSED		SEALED CONTACT																
	UTILITY REVENUE METER		BUSHING CURRENT TRANSFORMER, MULTI-RATIO AND QUANTITY INDICATED		REMOTE DEVICE		BUZZER																
	GROUND		MOTOR OPERATOR, BREAKER OR SWITCH		TIME DELAY RELAY CONTACT, NORMALLY OPEN, CLOSSES WHEN ENERGIZED AND TIMED OUT		POTENTIOMETER																
	TRANSFORMER, SIZE, VOLTAGE RATINGS, AND PHASE INDICATED		ENERGY MONITORING UNIT		TIME DELAY RELAY CONTACT, NORMALLY CLOSED, OPENS WHEN ENERGIZED AND TIMED OUT		RESISTOR																
	SHIELDED ISOLATION TRANSFORMER		MOTOR PROTECTION RELAY		TIME DELAY RELAY CONTACT, CLOSSES WHEN ENERGIZED, OPENS WHEN DE-ENERGIZED AND TIMED OUT		BLOWN FUSE INDICATOR																
	POTENTIAL TRANSFORMER, VOLTAGE RATING AND QUANTITY INDICATED		NOTES: 1. THESE ARE STANDARD LEGEND SHEETS. SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THE LEGEND AND NOT ON THE DRAWINGS. 2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (CIVIL, MECHANICAL, AND STRUCTURAL) SEE OTHER LEGENDS.		TIME DELAY RELAY CONTACT, OPENS WHEN ENERGIZED, CLOSSES WHEN DE-ENERGIZED AND TIMED OUT		COAXIAL CABLE																
	CURRENT TRANSFORMER, RATIO(100:5) AND QUANTITY INDICATED (3)				MOTOR SPACE HEATER		MULTICONDUCTOR SHIELDED CABLE																
	CONNECTION POINT TO EQUIPMENT SPECIFIED IN OTHER DIVISIONS, RACEWAY, CONDUCTOR AND CONNECTION IN THIS DIVISION				TERMINAL BLOCK, REMOTE		DUPLEX RECEPTACLE																
					TERMINAL BLOCK, INTERNAL		RELAY, WITH MECHANICAL LATCH																
					FUSED TERMINAL BLOCK		FULLWAVE DIODE BRIDGE (AC TO DC)																
					FUSE, RATING INDICATED																		
					TRANSFORMER, CONTROL POWER																		

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ENGINEER OF RECORD	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES					
	NO.	DATE	DESCRIPTION						
				WOODWARD WAY SEWER IMPROVEMENTS ELECTRICAL LEGEND 1					
				SURVEYOR	FIELD	BOOKS	L.L.	DIST.	COUNTY
				DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY	DATE	SCALE
				D CORBETT	J LANDMAN		T KELLEY	AUG 2017	NTS
				PROJECT NUMBER:				SHEET 4 OF 41	

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
POWER SYSTEM PLAN-1		POWER SYSTEM PLAN-2		FIRE ALARM SYSTEM PLAN AND RISER		SOUND SYSTEM PLAN AND RISER	
	CONNECTION POINT TO EQUIPMENT SPECIFIED, RACEWAY, CONDUCTOR, TERMINATION AND CONNECTION IN THIS DIVISION.		BREAKER, SEPARATELY MOUNTED, CURRENT RATING INDICATED (100/40, 100 = FRAME SIZE, 40 = TRIP RATING) 3 POLE		FIRE ALARM STATION, MANUAL		SPEAKER, CONE TYPE, RECESSED IN CEILING, SEE ARCHITECTURAL DRAWINGS FOR CEILING TYPE
	MAJOR ELECTRICAL COMPONENT OR DEVICE - NAME OR IDENTIFYING SYMBOL AS SHOWN.		CONTACTOR, MAGNETIC, NEMA SIZE INDICATED		FIRE ALARM SYSTEM, AUTOMATIC SMOKE DETECTOR		SPEAKER, CONE TYPE, WALL MOUNTED
	PANELBOARD - SURFACE MOUNTED		LIGHTING CONTACTOR, CURRENT RATING INDICATED		FIRE ALARM SYSTEM, AUTOMATIC, HEAT DETECTOR		SPEAKER, CONE TYPE, SURFACE MOUNTED
	PANELBOARD LETTER OR NUMBER FACILITY NUMBER LP - LOW VOLTAGE PANEL DP - DISTRIBUTION PANEL		STARTER, MAGNETIC NEMA SIZE INDICATED		FIRE ALARM BELL		VOLUME CONTROL, WALL MOUNT 5'-0" AFF
	PANELBOARD - FLUSH MOUNTED		CONVENIENCE RECEPTACLE - DUPLEX UNLESS NOTED OTHERWISE WP - WEATHERPROOF C - CLOCK HANGER TL - TWIST LOCK CRE - CORROSION RESISTANT GFCI - GROUND FAULT CIRCUIT INTERRUPTER SUBSCRIPT NUMBER AT RECEPTACLE INDICATES CIRCUIT		FIRE ALARM HORN		INTERIOR PAGING TRUMPET SOUND REPRODUCER WITH REMOTE AMPLIFIER, SURFACE MOUNTED
	TERMINAL JUNCTION BOX		240V RECEPTACLE		FIRE ALARM STROBE LIGHT		MICROPHONE OUTLET
	MOTOR, SQUIRREL CAGE INDUCTION		CONVENIENCE RECEPTACLE - QUADRUPLX		AIR DUCT DETECTOR		SOUND SYSTEM RACEWAY
	GENERATOR, VOLTAGE AND SIZE AS INDICATED.		MULTI OUTLET ASSEMBLY		FIRE SPRINKLER FLOW SWITCH		COMMUNICATION STATION
	HOME RUN - DESTINATION SHOWN		DUPLEX CONVENIENCE RECEPTACLE - FLUSH IN FLOOR		FIRE SPRINKLER TAMPER SWITCH	SECURITY SYSTEM PLAN AND RISER	
	EXPOSED CONDUIT AND CONDUCTORS		CONVENIENCE RECEPTACLE, PEDESTAL, DUPLEX SINGLE FACE UNLESS INDICATED OTHERWISE	TELEPHONE SYSTEM PLAN AND RISER			CARD KEY ACCESS
	CONCEALED CONDUIT AND CONDUCTORS		RECEPTACLE, SPECIAL PURPOSE-NEMA CONFIGURATION AND AMPERAGE INDICATED		TELEPHONE TERMINAL CABINET		CONTROL STATION
NOTE: ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO. 12, ONE NO. 12 GROUND CONDUCTORS IN 3/4" CONDUIT. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF NO. 12 CONDUCTORS. CROSSHATCH WITH SUBSCRIPT "G" INDICATES GREEN GROUND WIRE.			THERMOSTAT		TELEPHONE RECEPTACLE FLOOR BOX		DOOR SWITCH
	CROSSHATCHES WITH BAR INDICATE NO.10 CONDUCTOR, SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE.		UTILITY REVENUE METERING FACILITY		TELEPHONE RECEPTACLE		EGRESS PUSHBUTTON
	CONDUIT AND CONDUCTOR CALLOUT, SEE LEGEND.		ELECTRIC UNIT HEATER		TELEPHONE SYSTEM RACEWAY		ELECTRONIC LOCK M = MAGNETIC S = STRIKE
	CONDUIT DOWN		ELECTRIC AIR CONDITIONER (SELF CONTAINED UNIT)	COMPUTER SYSTEM (DATA) PLAN AND RISER			INTERCOM
	CONDUIT UP		UTILITY POLE		COMPUTER SYSTEM TERMINAL CABINET		MONITOR
	CONDUIT, STUBBED AND CAPPED	LIGHTING SYSTEM PLAN			COMPUTER NETWORK CONNECTION		MOTION SENSOR
	CONDUIT TERMINATION AT CABLE TRAY		LUMINAIRE, SEE SCHEDULE		COMPUTER NETWORK CONNECTION, FLUSH IN FLOOR		VIDEO CAMERA PTZ = PAN/TILT/ZOOM F = FIXED
	EXISTING CONDUIT/ DUCT BANK		LUMINAIRE, SEE SCHEDULE		DATA SYSTEM RACEWAY	GROUND SYSTEM PLAN	
	BUS DUCT - SEE SPECIFICATIONS		LUMINAIRE WITH INTERNAL BATTERY BACKUP, SEE SCHEDULE	COMBINED TELEPHONE/COMPUTER SYSTEM PLAN AND RISER			GROUND ROD
	CONCRETE ENCASED CONDUIT		STRIP LUMINAIRE, SEE SCHEDULE		COMBINATION TELEPHONE/DATA RECEPTACLE, WALL MOUNTED, NUMBER OF PORTS INDICATED		GROUND ROD IN TEST WELL
	DIRECT BURIED CONDUIT		LUMINAIRE AND POLE, SEE SCHEDULE		COMBINATION TELEPHONE/DATA RECEPTACLE, FLOOR BOX, NUMBER OF PORTS INDICATED		GROUNDING CONDUCTOR, SIZE AS INDICATED
	FIBER OPTIC CONDUIT		WALL MOUNTED LUMINAIRE, SEE SCHEDULE	CLOSED CIRCUIT/TELEVISION CABLE PLAN AND RISER			PIGTAIL FOR CONNECTION TO EQUIPMENT CABINET OR FRAME
	CONCRETE ENCASED DUCT BANK WHERE XXXX IS THE DUCT BANK NAME, SEE CIRCUIT AND RACEWAY CODING DEFINITION		FLOOD LIGHTS - AIM IN THE DIRECTION SHOWN		COMBINATION CLOSED CIRCUIT TELEVISION RECEPTACLE (CCTV) AND DUPLEX CONVENIENCE RECEPTACLE IN TWO GANG BOX WITH BARRIER, 12" DOWN FROM CEILING		EQUIPMENT GROUND BUS
	CONCEALED CONDUIT ROUTING AREA		STANDBY LIGHTING UNIT, SURFACE MOUNTED, SEE SCHEDULE		COMBINATION TELEVISION CABLE RECEPTACLE (TV) AND DUPLEX CONVENIENCE RECEPTACLE IN TWO GANG BOX WITH BARRIER, 12" DOWN FROM CEILING		EQUIPMENT NEUTRAL BUS
	CONDUIT ROUTING AREA		EXIT LIGHTS - FILLED SECTION INDICATES LIGHTED FACE, ARROW INDICATES EGRESS DIRECTIONAL INDICATORS, XX = FIXTURE NUMBER, SEE SCHEDULE		CLOSED CIRCUIT TELEVISION RECEPTACLE, FLOOR BOX		
	CABLE TRAY		SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING. SUBSCRIPT NUMBER AT LUMINAIRE INDICATES CIRCUIT		TELEVISION CABLE RECEPTACLE, FLOOR BOX		
	TRANSFORMER		WALL SWITCH: 2- DOUBLE POLE P- PILOT LIGHT 3- THREE WAY K- KEY OPERATED 4- FOUR WAY D- DIMMER WP- WEATHERPROOF CRE- CORROSION RESISTANT EX- EXPLOSIONPROOF L- MOMENTARY 3-WAY M- MOTOR RATED MS- MANUAL STARTER WITH OVERLOADS				
	GENERAL CONTROL OR WIRING DEVICE. LETTER SYMBOLS OR ABBREVIATIONS INDICATE TYPE OF DEVICE		OCCUPANCY SENSOR				
	CONTROL STATION, SEE CONTROL DIAGRAMS FOR CONTROL DEVICE(S) REQUIRED.		LIGHTING CONTACTOR				
	NONFUSED DISCONNECT SWITCH, CURRENT RATING INDICATED, 3 POLE		MOTION DETECTOR				
	FUSED DISCONNECT SWITCH, CURRENT RATING INDICATED (60/40, 60=SWITCH RATING / 40=FUSE RATING) 3 POLE		PHOTOCELL				
	COMBINATION CIRCUIT BREAKER AND MAGNETIC STARTER, NEMA SIZE INDICATED						

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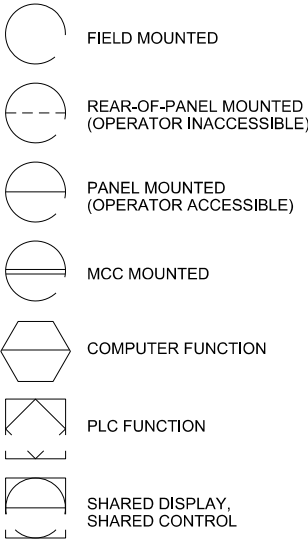
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ENGINEER OF RECORD	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES							
	NO.	DATE	DESCRIPTION								
				WOODWARD WAY SEWER IMPROVEMENTS ELECTRICAL LEGEND 2							
SURVEYOR		FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE				
DRAWN BY D CORBETT		DESIGNED BY J LANDMAN	CHECKED BY	BY	APPROVED BY T KELLEY	DATE AUG 2017	NTS				
PROJECT NUMBER:										SHEET OF	41
										5	

INSTRUMENT IDENTIFICATION

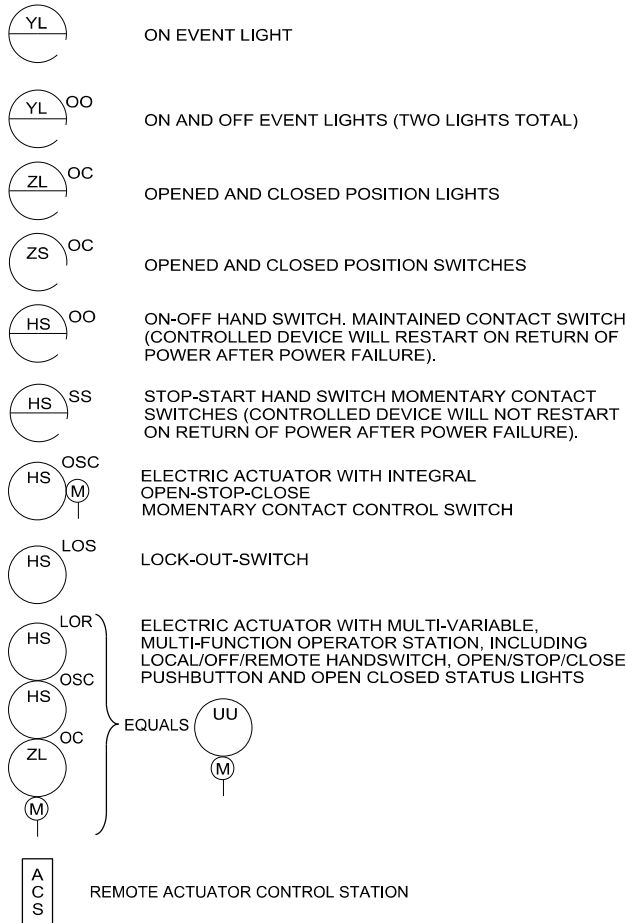
EXAMPLE SYMBOLS

FF	BB	U	UNIT PROCESS NUMBER
ULL	F		INSTRUMENT LETTER(S)
	BB		CLARIFYING ABBREVIATIONS
	LL		LOOP NUMBER

GENERAL INSTRUMENT OR FUNCTIONAL SYMBOLS



SPECIAL CASES

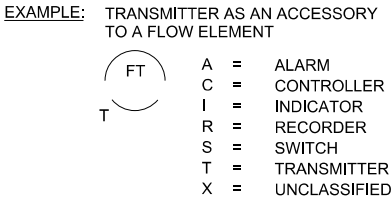


INSTRUMENT IDENTIFICATION LETTERS TABLE

LETTER	FIRST-LETTER		SUCCEEDING-LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (+)		ALARM		
B	BURNER, COMBUSTION				BEACON
C				CONTROL	CLOSE(D)
D	DENSITY (S.G.)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT, SENSOR		
F	FLOW RATE	RATIO (FRACTION)			
G			GLASS, GAUGE VIEWING DEVICE	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION	MOMENTARY			MIDDLE, INTERMEDIATE
N	TORQUE				
O			ORIFICE, RESTRICTION		OPEN(ED)
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL		
X	MOISTURE	X AXIS	UNCLASSIFIED (+)	UNCLASSIFIED (+)	UNCLASSIFIED (+)
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE, CONVERT	
Z	POSITION	Z AXIS		DRIVE, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

TABLE BASED ON THE INTERNATIONAL SOCIETY OF AUTOMATION (ISA) STANDARD.
(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.

ACCESSORY DEVICES



TRANSDUCERS

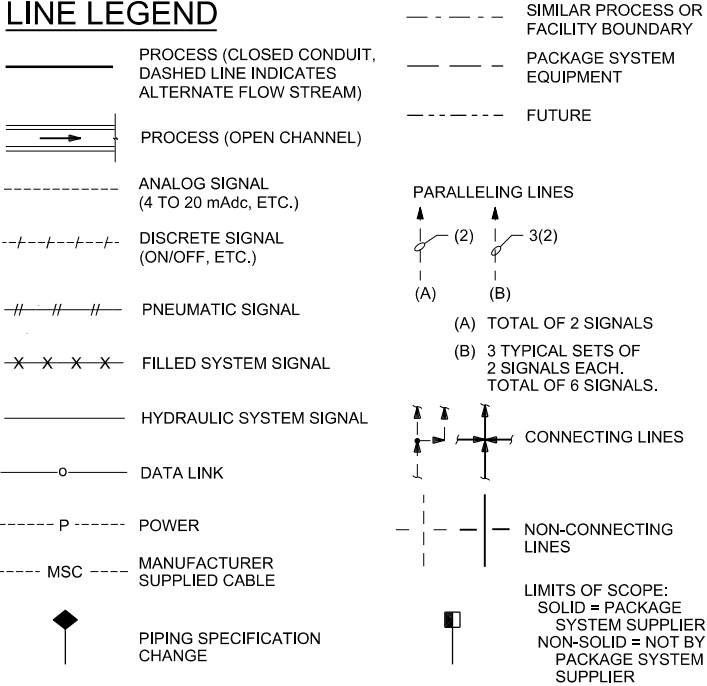
A	ANALOG	I	CURRENT
D	DIGITAL	P	PNEUMATIC
E	VOLTAGE	PF	PULSE FREQUENCY
F	FREQUENCY	PD	PULSE DURATION
H	HYDRAULIC	R	RESISTANCE



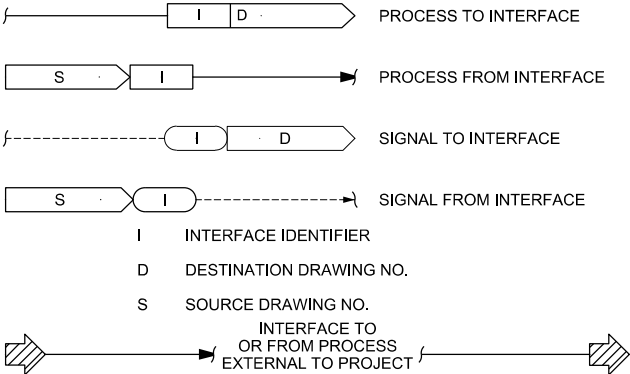
DIGITAL SYSTEM INTERFACES

▲	ANALOG INPUT	WHERE X=
▼	ANALOG OUTPUT	A = ALARM
△x	DISCRETE INPUT	S = STATUS
▽x	DISCRETE OUTPUT	

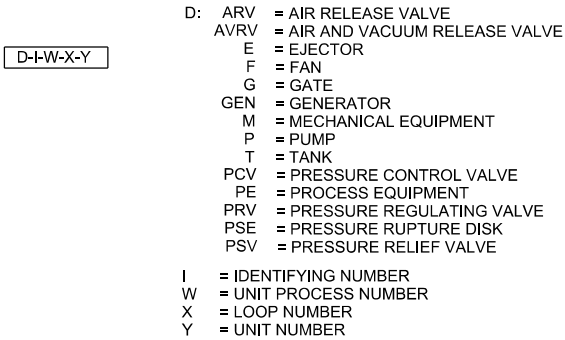
LINE LEGEND



INTERFACE SYMBOLS



SELF CONTAINED VALVE & EQUIPMENT TAG NUMBERS



ABBREVIATIONS & LETTER SYMBOLS

Δ	DIFFERENCE	✓	SQUARE ROOT
Σ	SUM	AVG	AVERAGE
X	MULTIPLY	1:1	REPEAT OR BOOST
÷	DIVIDE	>	SELECT HIGHEST SIGNAL
f(x)	CHARACTERIZED	<	SELECT LOWEST SIGNAL
X^n	RAISE TO THE Nth POWER	}	BIAS
		%	GAIN OR ATTENUATE

ABBREVIATIONS & LETTER SYMBOLS

ETM	ELAPSED TIME METER
FP-W-X	FIELD PANEL NO. WX (W = UNIT PROCESS NUMBER X = PANEL NUMBER)
MPR	MOTOR PROTECTION RELAY
OOA	ON-OFF-AUTO

GENERAL NOTES

- COMPONENTS AND PANELS SHOWN WITH A * ARE PART OF A PACKAGE SYSTEM; SEE EQUIPMENT SPECIFICATIONS. FOR MULTIPLE PACKAGES ON SAME DRAWING, USE *, *2, *3, ETC.
- COMPONENTS SHOWN WITH DOUBLE ASTERISK (**) ARE PROVIDED AS PART OF WORK UNDER DIVISION 26 (ELECTRICAL).
- COMPONENTS SHOWN WITH A DIAMOND (◆) ARE PART OF SECTION 40 90 00, PROCESS INSTRUMENTATION AND CONTROLS.
- THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.

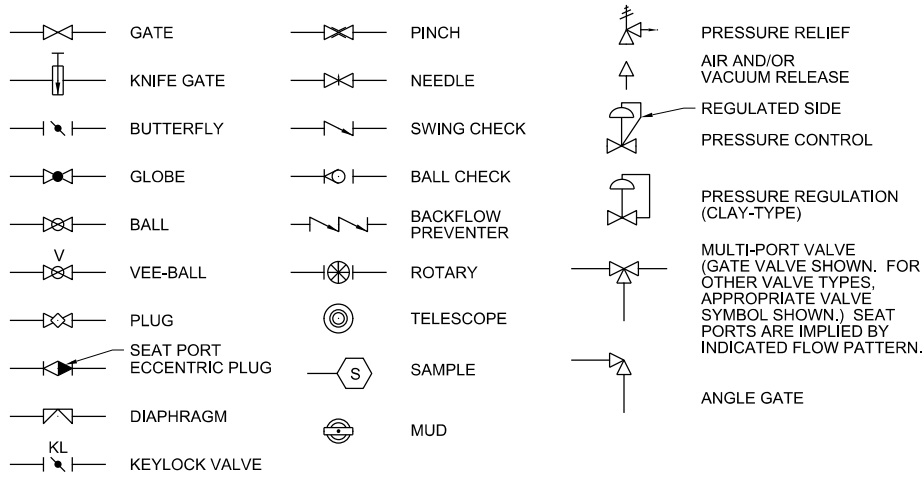
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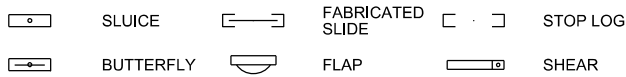
REVISIONS		CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES				
NO.	DATE	DESCRIPTION				
SURVEYOR		FIELD BOOKS	L.L.	DIST.	COUNTY	SCALE
DRAWN BY G MESSER		DESIGNED BY CL BATES	CHECKED BY CH	APPROVED BY APP	DATE AUG 2017	SCALE
PROJECT NUMBER:			SHEET 7 OF 41			

ENGINEER OF RECORD

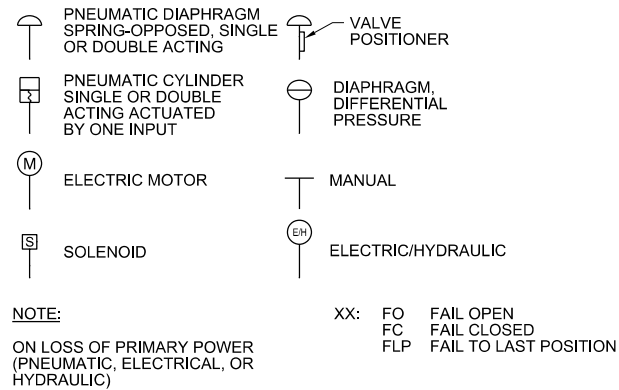
VALVE SYMBOLS



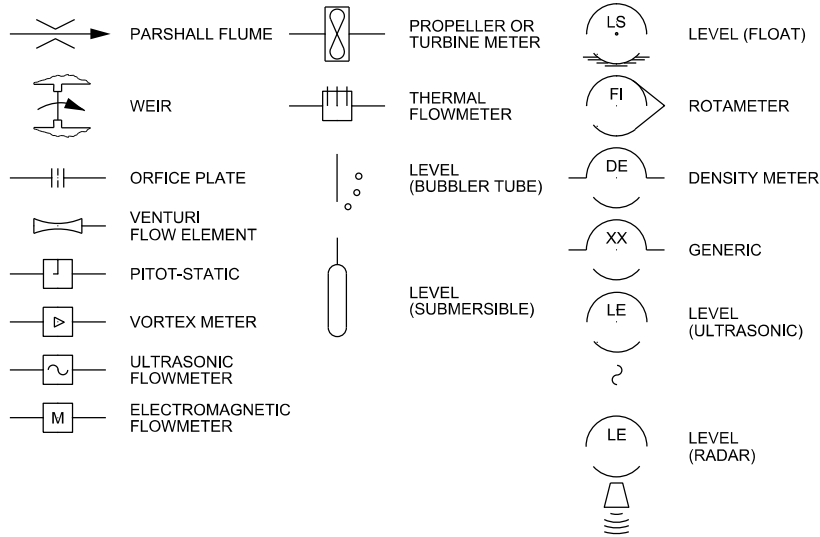
GATE SYMBOLS



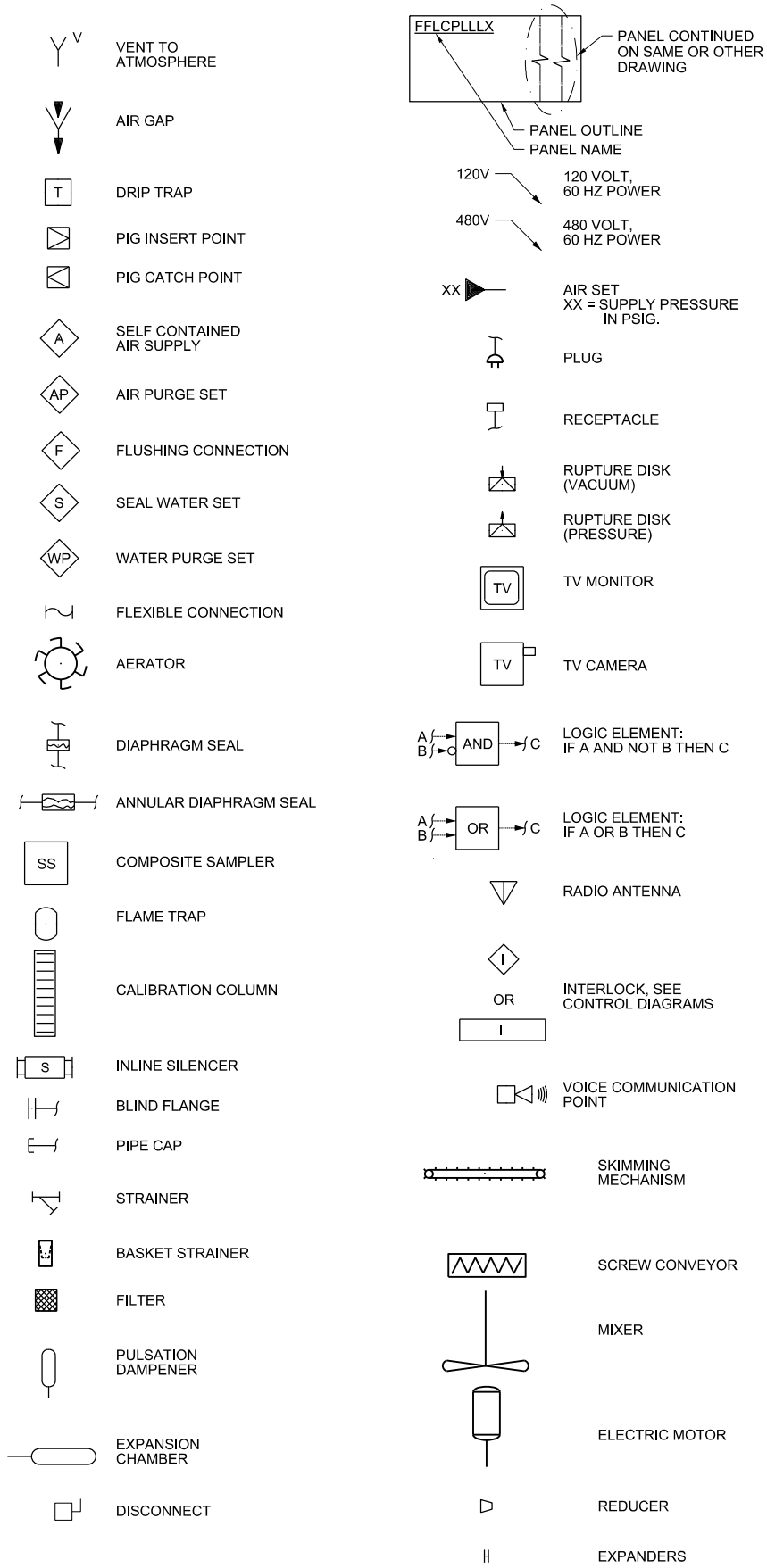
ACTUATOR SYMBOLS



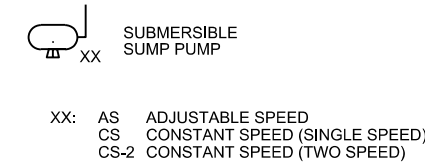
PRIMARY ELEMENT SYMBOLS



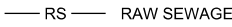
MISCELLANEOUS SYMBOLS



PUMP AND COMPRESSOR SYMBOLS



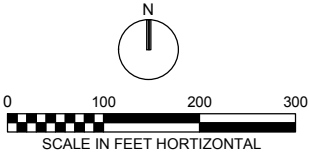
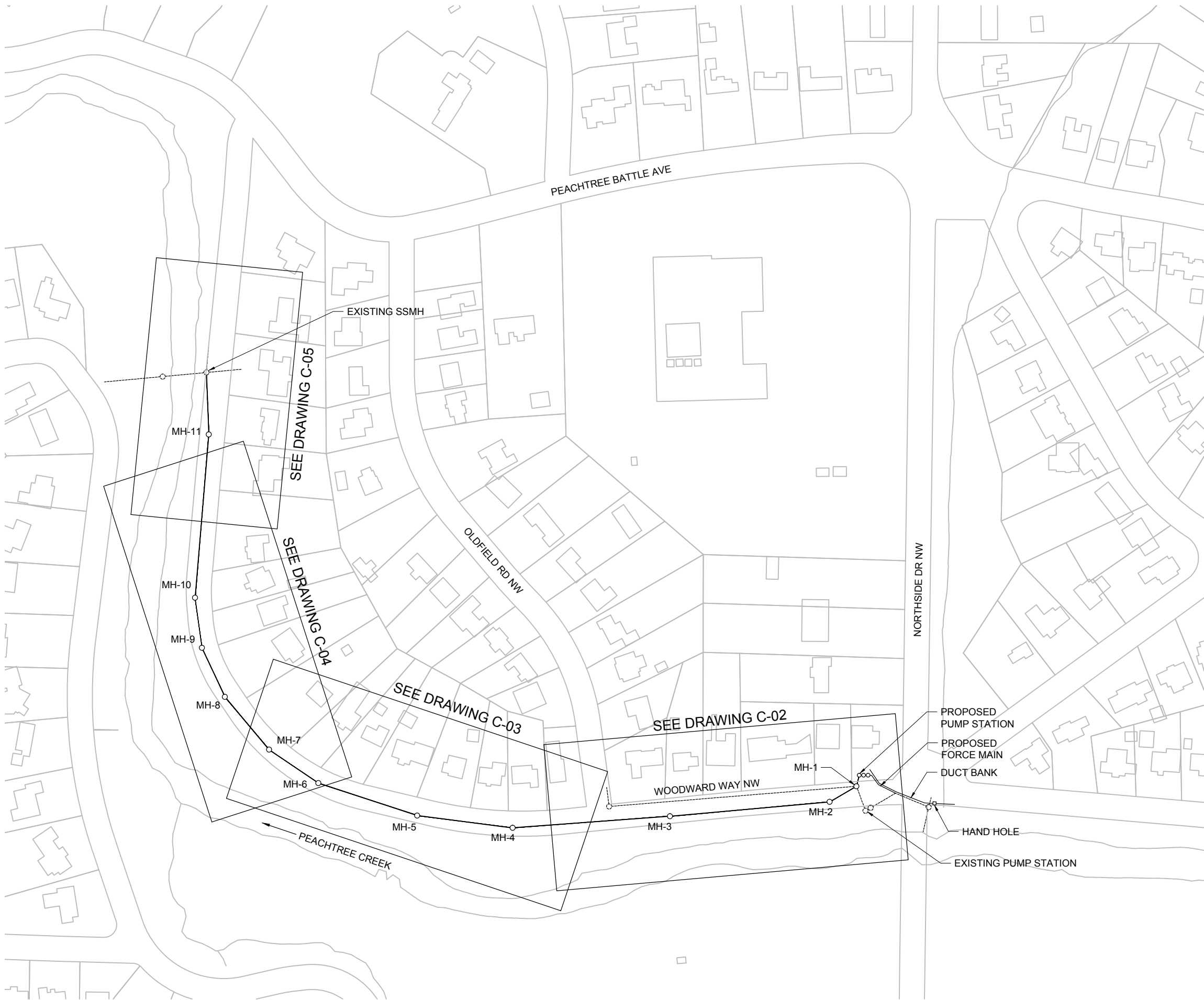
FLOW STREAM IDENTIFICATION





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ENGINEER OF RECORD	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES					
	NO.	DATE	DESCRIPTION	WOODWARD WAY SEWER IMPROVEMENTS INSTRUMENTATION & CONTROLS LEGEND 2					
				SURVEYOR	FIELD	BOOKS	L.L.	DIST.	COUNTY
									SCALE
				DRAWN BY G MESSER	DESIGNED BY CL BATES	CHECKED BY CH	APPROVED BY APP	DATE AUG 2017	
				PROJECT NUMBER:				SHEET 8 OF 41	

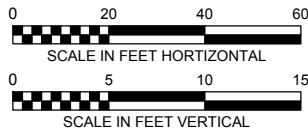
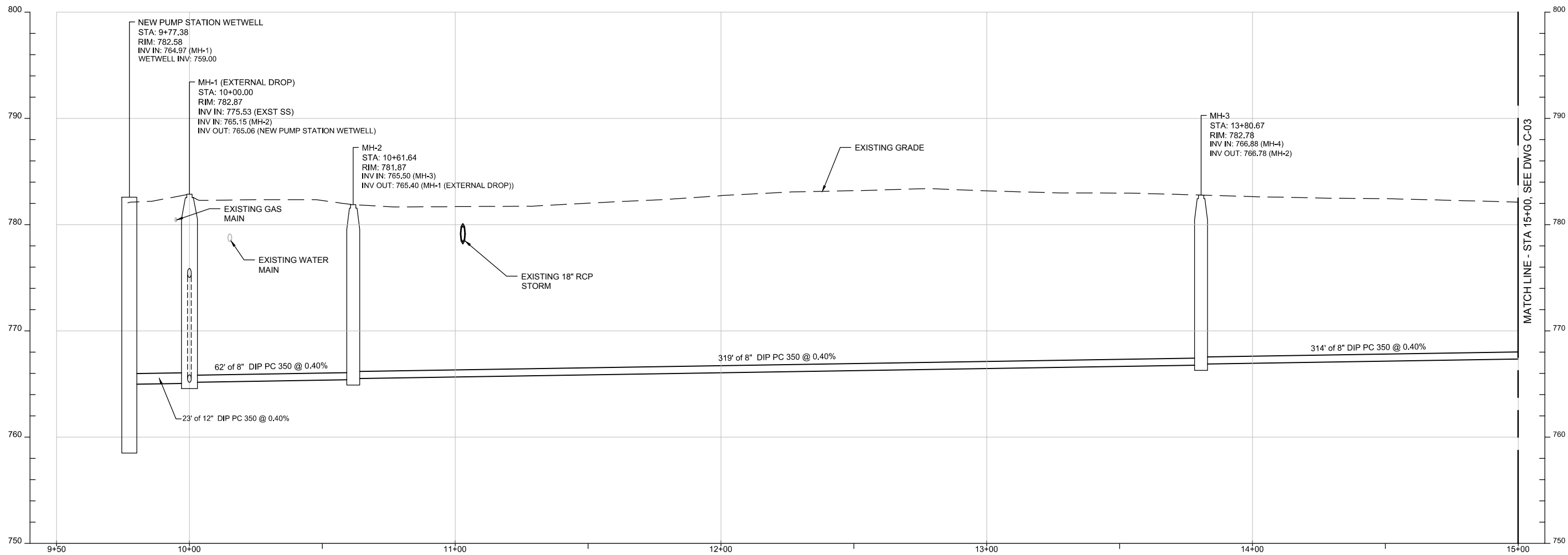
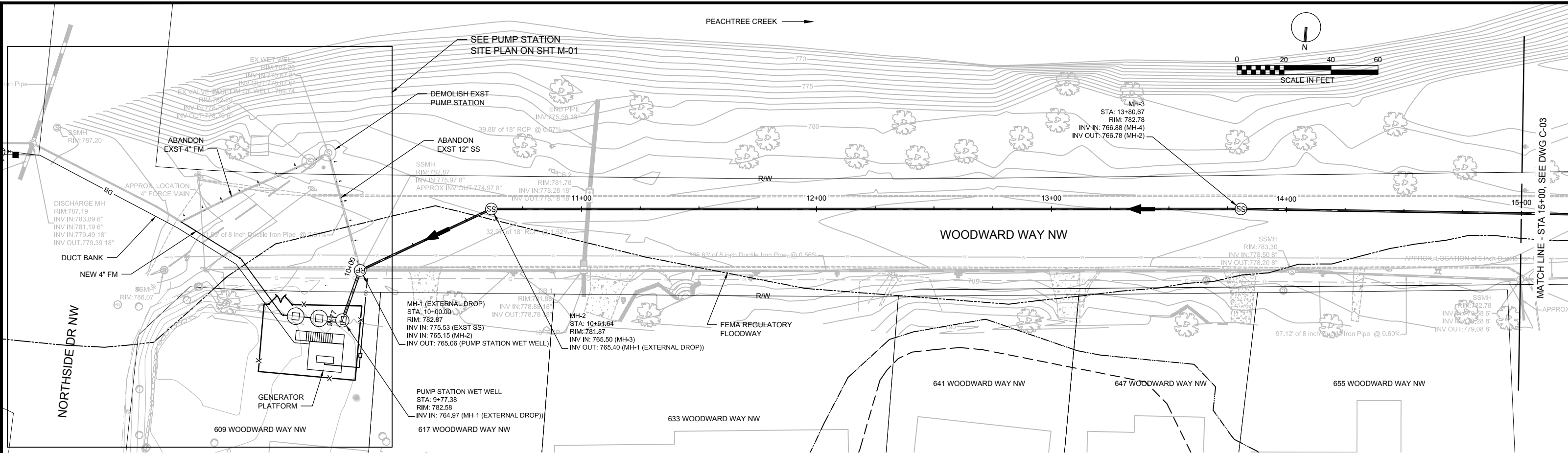
STRUCTURE TABLE					
MANHOLE	WORK	NORTHING	EASTING	DIAMETER	COVER TYPE
MH-12	NEW	1390698.30	2221998.50	4-FT	WATERTIGHT FRAME AND COVER
MH-11	NEW	1390588.42	2222003.51	4-FT	WATERTIGHT FRAME AND COVER
MH-10	NEW	1390263.44	2221976.08	4-FT	WATERTIGHT FRAME AND COVER
MH-9	NEW	1390163.91	2221989.87	4-FT	WATERTIGHT FRAME AND COVER
MH-8	NEW	1390066.18	2222035.58	4-FT	WATERTIGHT FRAME AND COVER
MH-7	NEW	1389961.15	2222123.33	4-FT	WATERTIGHT FRAME AND COVER
MH-6	NEW	1389894.55	2222221.43	4-FT	WATERTIGHT FRAME AND COVER
MH-5	NEW	1389829.98	2222418.14	4-FT	WATERTIGHT FRAME AND COVER
MH-4	NEW	1389805.49	2222608.14	4-FT	WATERTIGHT FRAME AND COVER
MH-3	NEW	1389828.59	2222920.97	4-FT	WATERTIGHT FRAME AND COVER
MH-2	NEW	1389857.13	2223238.72	4-FT	WATERTIGHT FRAME AND COVER
MH-1 (DROP)	NEW	1389888.17	2223291.97	5-FT	WATERTIGHT FRAME AND COVER
PUMP STATION WET WELL	NEW	1389910.07	2223297.62	5-FT	H-20 RATED ALUM ACCESS HATCH
VALVE VAULT	NEW	1389910.07	2223307.58	6-FT	H-20 RATED ALUM ACCESS HATCH
FLOWMETER VAULT	NEW	1389910.07	2223317.58	6-FT	H-20 RATED ALUM ACCESS HATCH
HANDHOLE	NEW	1389852.30	2223442.61	NA	WATERTIGHT FRAME AND COVER




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REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES WOODWARD WAY SEWER IMPROVEMENTS OVERALL PLAN						
NO.	DATE	DESCRIPTION	SURVEYOR	FIELD BOOKS	L.L.	DIST.	COUNTY	SCALE	
			DRAWN BY D CORBETT	DESIGNED BY J REYNOLDS	CHECKED BY A BYARD	APPROVED BY T KELLEY	DATE AUG 2017		
ENGINEER OF RECORD			PROJECT NUMBER:			SHEET OF 41			

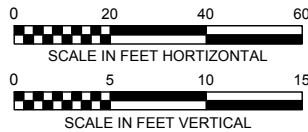
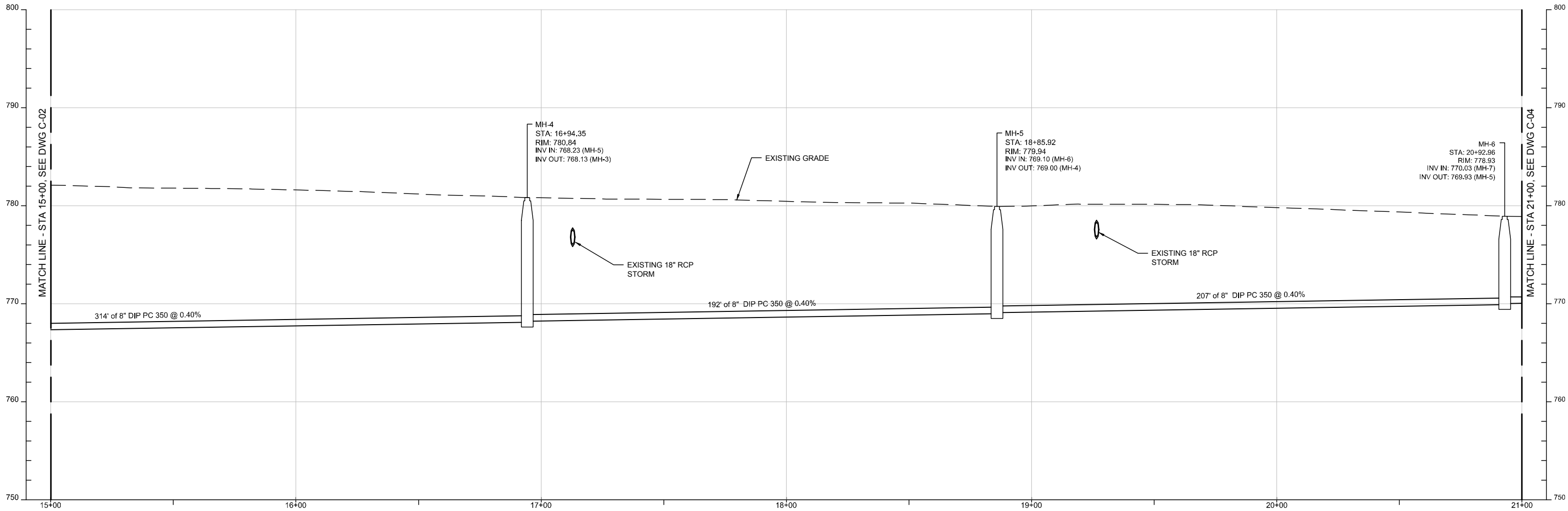
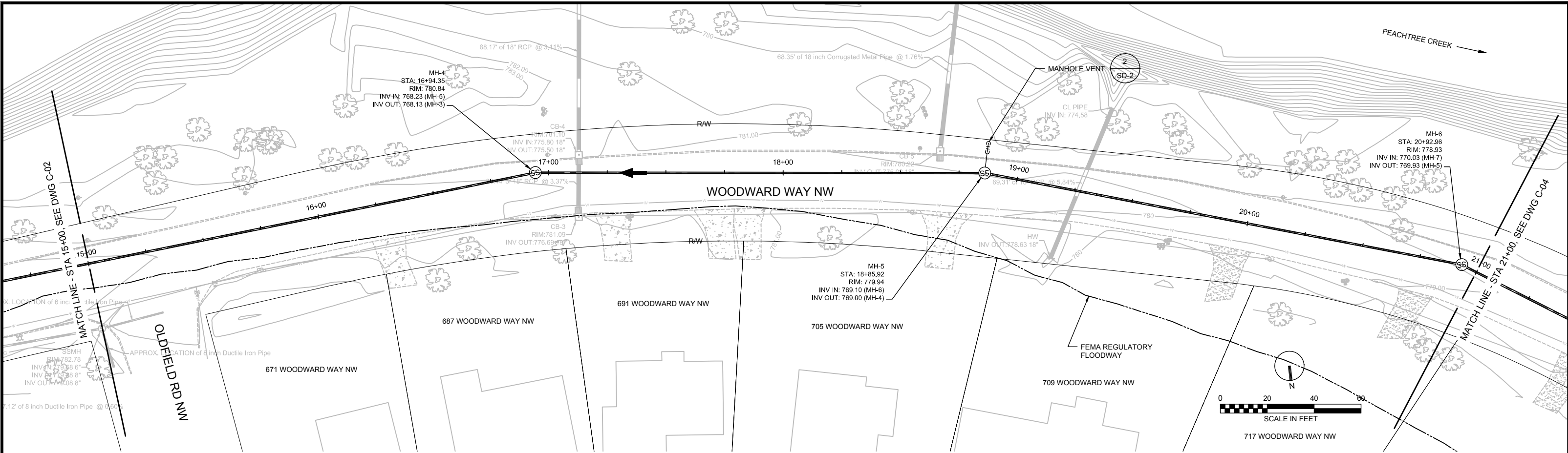


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REVISIONS				CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES					
NO.	DATE	DESCRIPTION		WOODWARD WAY SEWER IMPROVEMENTS PLAN AND PROFILE - STA 10+00 TO STA 15+00					
				SURVEYOR	FIELD	BOOKS	L.L.	DIST.	COUNTY
				DRAWN BY	DESIGNED BY	CHECKED BY	BY	APPROVED BY	DATE
				D CORBETT	J REYNOLDS	A BYARD		T KELLEY	AUG 2017
ENGINEER OF RECORD				PROJECT NUMBER:				SHEET OF 41	



ch2m | **ROHADF** a mont-robert

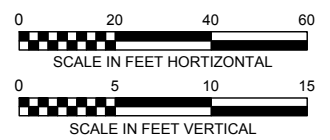
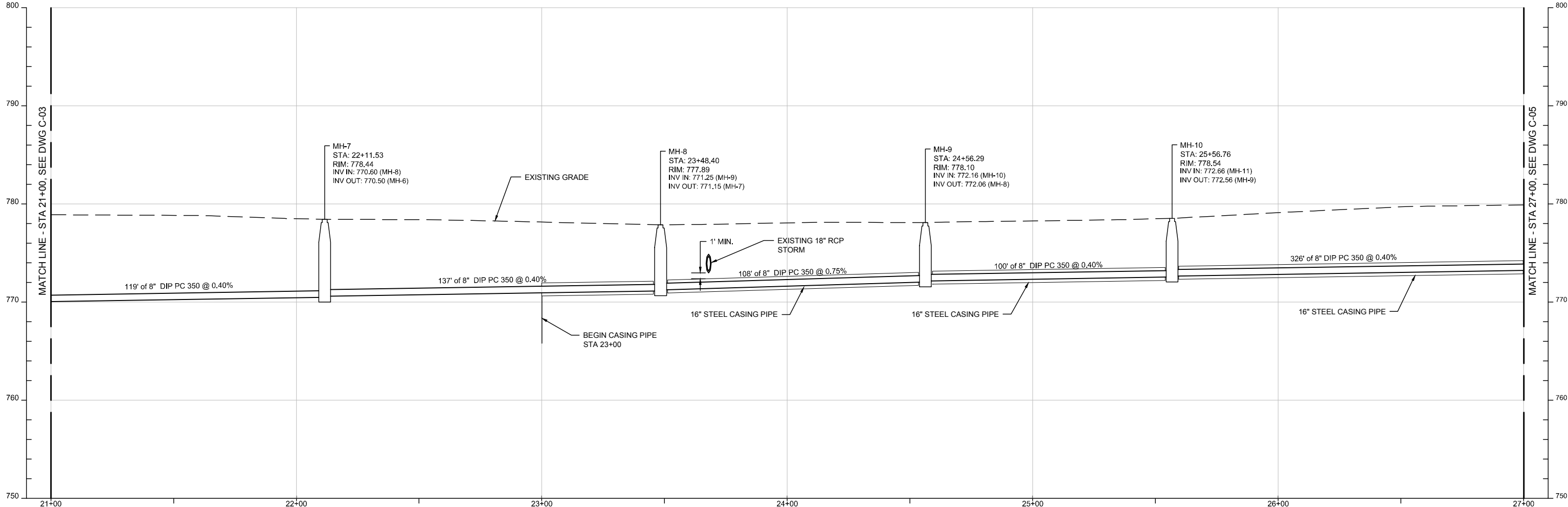
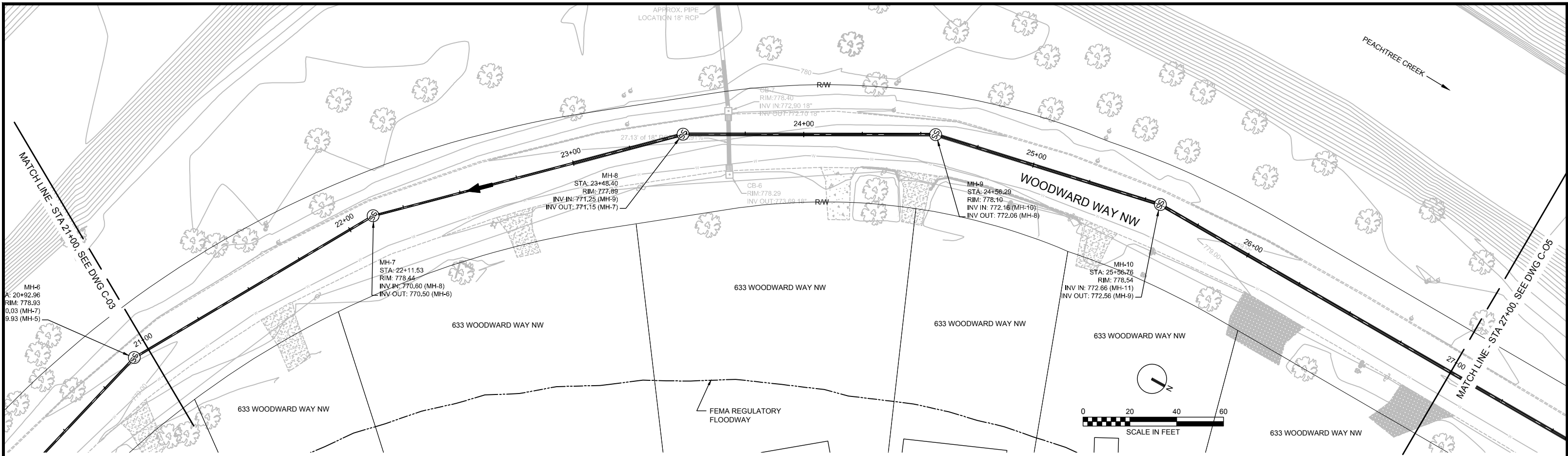
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	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES						
	NO.	DATE	DESCRIPTION							
				WOODWARD WAY SEWER IMPROVEMENTS PLAN AND PROFILE - STA 15+00 TO STA 21+00						
				SURVEYOR	FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE
				DRAWN BY D CORBETT	DESIGNED BY J REYNOLDS	CHECKED BY A BYARD	BY	APPROVED BY T KELLEY	BY	DATE AUG 2017
	ENGINEER OF RECORD			PROJECT NUMBER:						11 SHEET OF 41



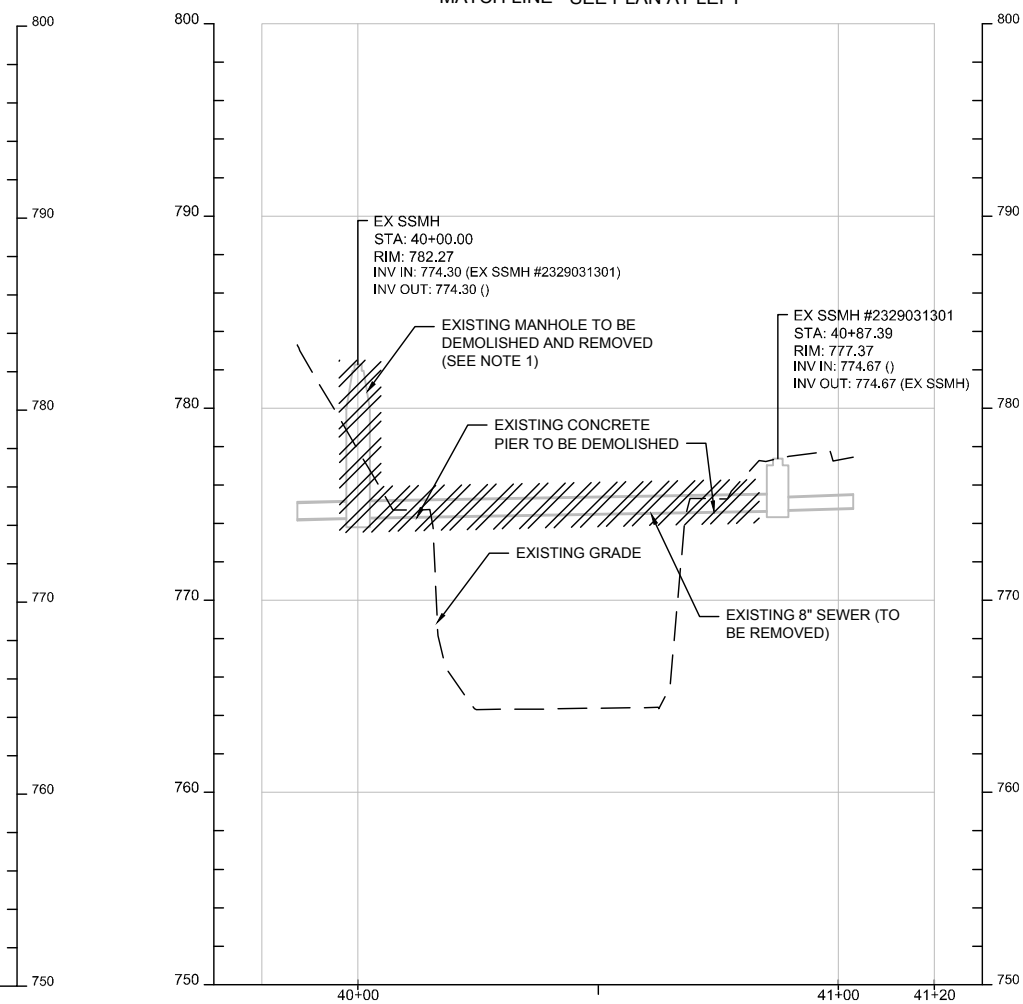
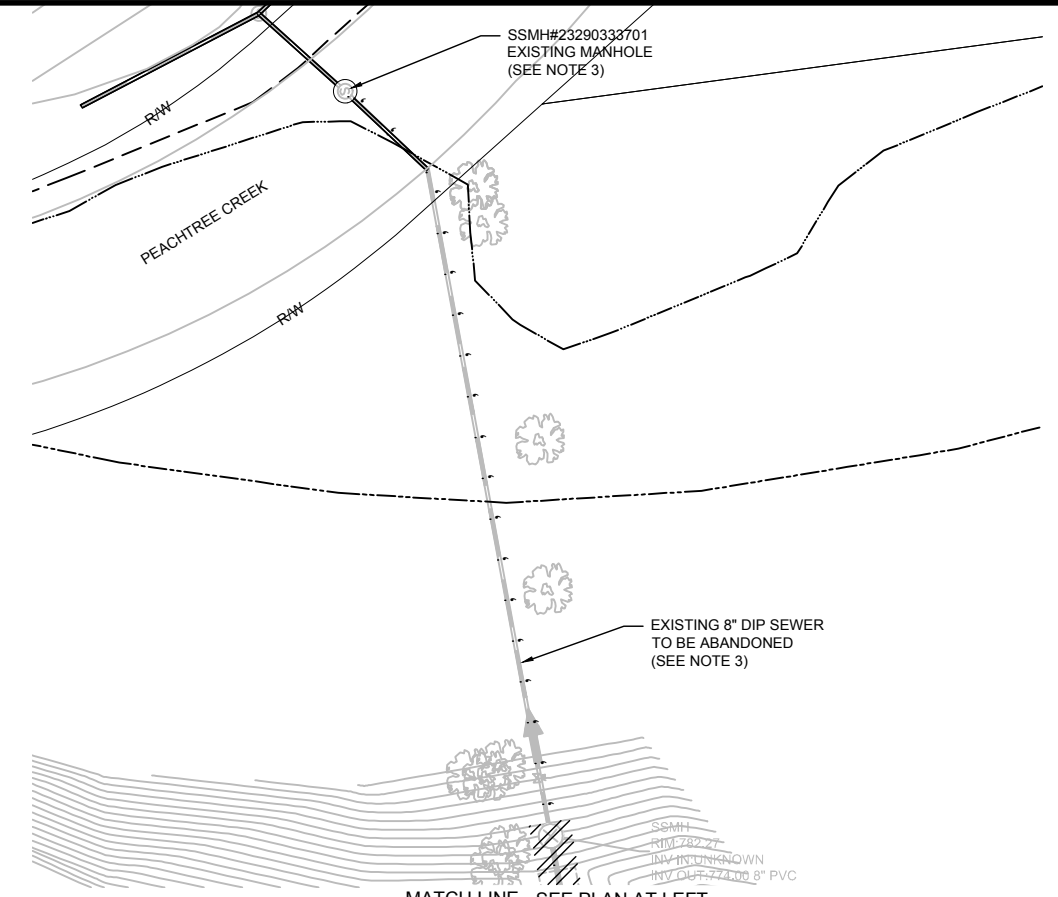
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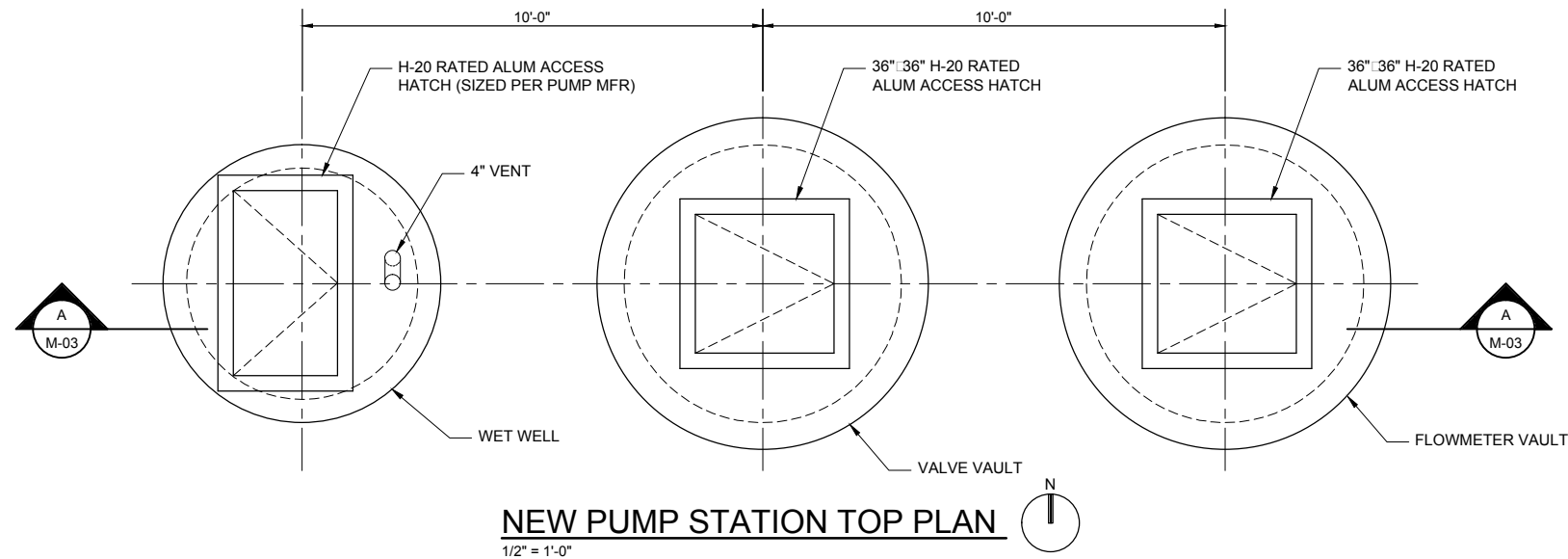
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CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES						
WOODWARD WAY SEWER IMPROVEMENTS PLAN AND PROFILE - STA 21+00 TO STA 27+00						
SURVEYOR		FIELD	BOOKS	L.L.	DIST.	COUNTY
D CORBETT		DESIGNED BY	J REYNOLDS	CHECKED BY	A BYARD	APPROVED BY
PROJECT NUMBER:						DATE
						AUG 2017
ENGINEER OF RECORD						SHEET 12 OF 41

100% REVIEW DOCUMENTS



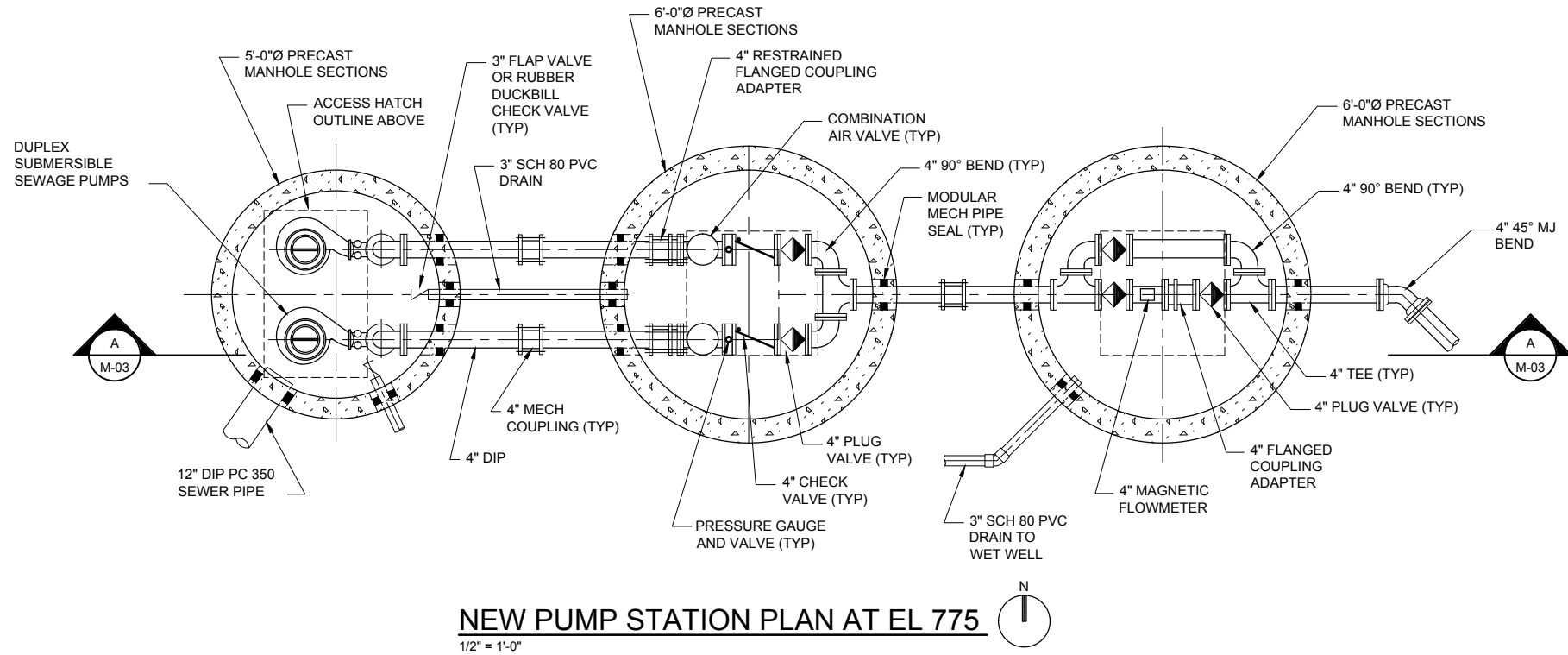
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	REVISIONS		CITY OF ATLANTA							
	NO.	DATE	DESCRIPTION	DEPARTMENT OF WATERSHED MANAGEMENT						
				OFFICE OF ENGINEERING SERVICES						
				WOODWARD WAY SEWER IMPROVEMENTS						
				PLAN AND PROFILE - STA 27+00 TO STA 30+09						
				SURVEYOR	FIELD BOOKS	L.L.	DIST.	COUNTY	SCALE	
				DRAWN BY D CORBETT	DESIGNED BY J REYNOLDS	CHECKED BY A BYARD	APPROVED BY T KELLEY	DATE AUG 2017		
ENGINEER OF RECORD			PROJECT NUMBER:					13	SHEET OF 41	



NEW PUMP STATION TOP PLAN

1/2" = 1'-0"



NEW PUMP STATION PLAN AT EL 775

1/2" = 1'-0"

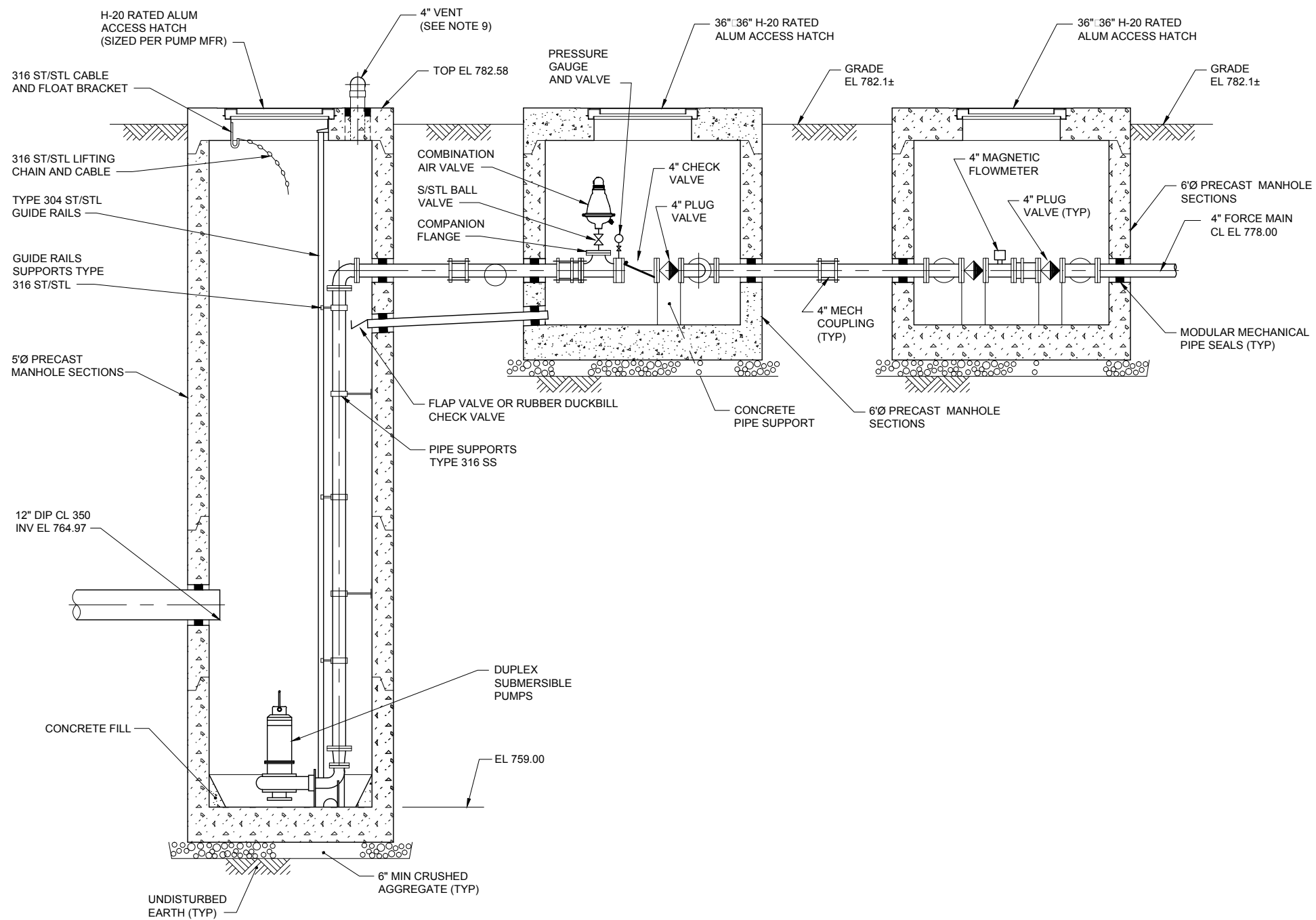
NOTES:

1. PRECAST CONCRETE STRUCTURES SHALL BE AS SPECIFIED IN 02730 SEWERS AND ACCESSORIES. SUBMIT SHOP DRAWINGS FOR APPROVAL.
2. VALVE VAULT SHALL HAVE TWO (2) COATS OF TAR EPOXY 9 MILS THICK INSIDE AND OUTSIDE.
3. PRESSURE GAUGES SHALL BE STAINLESS STEEL, RED VALVE SERIES 40 PRESSURE SENSOR (OR EQUAL), 4 1/2" DIAL AND HAVE SUFFICIENT RANGE TO READ 20% ABOVE THE DESIGN HEAD CONDITION.
4. ACCESS DOOR SHALL BE REINFORCED TO SUPPORT AASHTO H-20 WHEEL LOAD. BILCO J SERIES OR ENGINEER APPROVED.
5. ALL ELECTRICAL PANEL MOUNTING HARDWARE SHALL BE STAINLESS STEEL OR ALUMINUM, IE: STRUTS, STRAPS, AND BOLTS, ETC.
6. EPOXY LINER REQUIRED ON ENTIRE INTERNAL WETWELL SURFACES, INCLUDING TOP. SUBMIT SHOP DRAWINGS FOR APPROVAL.
7. ALL FITTINGS AND PIPING WITHIN THE WETWELL FROM THE BASE ELBOW TO THE PLUG VALVE AND BOX SHALL BE DUCTILE IRON.
8. ALL MOUNTING HARDWARE AND CONNECTING HARDWARE USED WITHIN THE WETWELL AND VALVE SHALL BE 316 STAINLESS STEEL.
9. ALL PIPE WITHIN THE WETWELL SHALL BE SUPPORTED AS RECOMMENDED BY THE PIPE MANUFACTURER. AT A MINIMUM, PIPE SHALL BE BRACED AND SUPPORTED AT 5' INTERVALS. ALL SUPPORT COMPONENTS SHALL BE 316 STAINLESS STEEL AND OF SUITABLE STRENGTH.
10. PROVIDE 4" VENT UTILIZING 316 SS (S-10) PIPE AND FITTINGS (WELDED CONSTRUCTION) SEAL AROUND CONCRETE TOP WITH NON-SHRINK GROUT. PROVIDE STAINLESS STEEL INSECT SCREEN WITH 1/4" OPENINGS.

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	NO.	DATE	DESCRIPTION								
				WOODWARD WAY SEWER IMPROVEMENTS NEW PUMP STATION PLANS AND SECTIONS							
				SURVEYOR		FIELD BOOKS		L.L. DIST.		COUNTY	SCALE
										FULTON	AS SHOWN
				DRAWN BY D CORBETT		DESIGNED BY J REYNOLDS		CHECKED BY A BYARD		APPROVED BY T KELLEY	DATE AUG 2017
	ENGINEER OF RECORD				PROJECT NUMBER:						SHEET OF 41
							15			41	



A SECTION
1/2" = 1'-0"
M-02

- NOTES:
1. PRECAST CONCRETE STRUCTURES SHALL BE AS SPECIFIED IN 02730 SEWERS AND ACCESSORIES. SUBMIT SHOP DRAWINGS FOR APPROVAL.
 2. VALVE VAULT SHALL HAVE TWO (2) COATS OF TAR EPOXY 9 MILS THICK INSIDE AND OUTSIDE.
 3. PRESSURE GAUGES SHALL BE STAINLESS STEEL, RED VALVE SERIES 40 PRESSURE SENSOR (OR EQUAL), 4 1/2" DIAL AND HAVE SUFFICIENT RANGE TO READ 20% ABOVE THE DESIGN HEAD CONDITION.
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PUMP DATA	
PRIMARY PUMP CAPACITY	300 GPM
PRIMARY TDH	43 FT
SPEED	1800 RPM
HORSEPOWER	5.5 HP
ELECTRICAL/VOLTS/PHASE	200V/3 PH
LAG ON	764.47
LEAD ON	763.97
PUMPS OFF	761.27
ALARM	764.97

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REVISIONS		CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES					
NO.	DATE	DESCRIPTION					
			WOODWARD WAY SEWER IMPROVEMENTS NEW PUMP STATION PLANS AND SECTIONS	SURVEYOR	FIELD	BOOKS	L.L.
				DIST.	COUNTY	FULTON	SCALE
				AS SHOWN	DRAWN BY	DESIGNED BY	CHECKED BY
				A BYARD	T KELLEY	DATE	AUG 2017
				PROJECT NUMBER:			
ENGINEER OF RECORD							SHEET 16 OF 41

1.0 GENERAL

- 1.1. FIELD VERIFY ALL EXISTING STRUCTURE DIMENSIONS AND LOCATIONS.
- 1.2. STRUCTURAL DIMENSIONS NOT SHOWN BUT CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED WITH THE MANUFACTURER PRIOR TO CONSTRUCTION.
- 1.3. EQUIPMENT ANCHOR BOLT SIZES, TYPES AND PATTERNS SHALL BE VERIFIED WITH THE MANUFACTURER. ALL BOLT PATTERNS SHALL BE TEMPLATED TO INSURE ACCURACY OF PLACEMENT.
- 1.4. STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH DRAWINGS OF ALL OTHER DISCIPLINES AND MANUFACTURER'S SHOP DRAWINGS.
- 1.5. IF A CONFLICT IS FOUND BETWEEN DIFFERENT PORTIONS OF THE CONTRACT DOCUMENTS, NOTIFY THE OWNER IMMEDIATELY. CONTINUED CONSTRUCTION OF THE AREA IN CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK UNTIL THE CONFLICT IS RESOLVED BY THE OWNER.
- 1.6. CONTRACTOR'S CONSTRUCTION AND /OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL, MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.
- 1.7. DO NOT CUT OR MODIFY STRUCTURAL MEMBERS FOR PIPES, DUCTS, EQUIPMENT, UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.
- 1.8. EQUIPMENT DIMENSIONS AND DATA SHOWN ON THE DRAWINGS ARE PRELIMINARY, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND COMPONENTS WITH THE MANUFACTURER'S SHOP DRAWINGS. CONTRACTOR SHALL AUTHENTICATE WITH THE MANUFACTURER THE ACTUAL UNIT THAT WILL BE DELIVERED TO THE SITE, INCLUDING, SERIAL NUMBER, SIZE, DIMENSIONS, WEIGHT AND COMPONENTS THAT WILL BE INSTALLED FOR THIS PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DELAYS THAT MAY OCCUR IF CONTRACTOR RECEIVES EQUIPMENT OTHER THAN THE GENERATOR SPECIFIED FOR THIS PROJECT.
- 1.9. FLOOD ELEVATION +788 FT.

2.0 CODES AND STANDARDS:

- 2.1. IBC - INTERNATIONAL BUILDING CODE WITH STATE OF GEORGIA AMENDMENTS
- 2.2. "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", AMERICAN SOCIETY OF CIVIL ENGINEERS, ASCE 7-10.
- 2.3. "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-14)" AMERICAN CONCRETE INSTITUTE

3.0 SPECIFICATIONS:

- 3.1. THE GENERAL NOTES ARE NOT A SUBSTITUTE OR A REPLACEMENT FOR THE PROJECT SPECIFICATIONS. THESE NOTES ARE INTENDED AS A GUIDE TO THE DESIGN AND/OR CONSTRUCTION REQUIREMENTS ESTABLISHED FOR THIS PROJECT. NO CONTRACTOR SHOULD ATTEMPT TO DESIGN, BID, OR CONSTRUCT ANY PORTION OF THE WORK HEREIN WITHOUT CONSULTING THE PROJECT SPECIFICATIONS. WHERE CONFLICTS OCCUR BETWEEN THESE NOTES AND THE SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL APPLY UNLESS A WRITTEN CLARIFICATION IS ISSUED BY THE STRUCTURAL ENGINEER.
- 3.2. CONTRACTOR AND STRUCTURAL FABRICATOR SHOULD ACQUAINT THEMSELVES WITH THE REQUIREMENTS FOR DOMESTICALLY PRODUCED BOLTS AND FOR CONNECTION DESIGN REQUIREMENTS NOTED HEREIN AND IN THE SPECIFICATIONS.

4.0 DESIGN LOADS:

- 4.1. GRAVITY LOADS:
- | AREA | LIVE LOAD | SUPERIMPOSED LOAD |
|-------------------------|--------------|-------------------|
| ELEVATED PLATFORM | 60 PSF | |
| STAIRS | 100 PSF | - |
| HAND RAIL | 50 PLF | 200 LB |
| IMPACT LOADS | | |
| MOTOR DRIVEN MACHINERY | 20% INCREASE | |
| RECIPROCATING MACHINERY | 50% INCREASE | - |
| SLAB ON GRADE | 200 PSF | - |
- 4.2. SEISMIC CRITERIA (ASCE 7-10):
- | | |
|---|------|
| RISK CATEGORY (ASCE TABLE 1.5-1) | II |
| IMPORTANCE FACTOR (ASCE TABLE 1.5-2) | 1.0 |
| SITE CLASS (SOIL PROPERTIES UNKNOWN) | D |
| SHORT PERIOD SPECTRAL ACCELERATION S ₁ | 0.18 |
| 1 st PERIOD SPECTRAL ACCELERATION S ₁ | 0.09 |
| SITE COEFFICIENT F _a (TABLE 11.4-1) | 1.6 |
| SITE COEFFICIENT F ₀ (TABLE 11.4-2) | 2.4 |
| SEISMIC DESIGN CATEGORY | B |
- 4.3. WIND LOADS PER ASCE 7-10 (3 SEC GUST)
- | | |
|---|---------|
| RISK CATEGORY | II |
| BASIC WIND SPEED | 115 MPH |
| WIND DIRECTIONALITY FACTOR K _d | 0.95 |
| EXPOSURE CATEGORY | C |
| RISK CATEGORY | II |
| TOPOGRAPHIC FACTOR K _z | 1 |
| GUST EFFECT FACTOR G | 0.85 |
- 4.4. GROUND SNOW LOAD PG, ASCE 7-10
- | | |
|-----------------------------------|-----|
| EXPOSURE FACTOR "C _e " | 1.0 |
| THERMAL FACTOR "C _t " | 1.2 |
| IMPORTANCE FACTOR "I" | 1.0 |

5.0 FOUNDATIONS:

- 5.1. NO GEOTECHNICAL STUDY HAS BEEN PERFORMED FOR THIS PROJECT ON THIS SITE.
- 5.2. DESIGN ASSUMPTIONS: SHALLOW FOUNDATION BEARING ON 6 INCH MINIMUM COMPACTED GRANULAR FILL OVER NATURAL SOILS AND ALLOWABLE BEARING CAPACITY OF 2000 PSF. CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING AND OBTAINING REQUIRED ALLOWABLE BEARING CAPACITY. CONTRACTOR SHALL EXPLICITLY FOLLOW ALL RECOMMENDATIONS OF THE OWNER'S GEOTECHNICAL ENGINEER WITH RESPECT OBTAINING REQUIRED FOUNDATION BEARING CAPACITIES.
- 5.3. PREVIOUS GEOTECHNICAL STUDIES MAY HAVE BEEN CONDUCTED BY THE OWNER ON THIS SITE OR ON ADJACENT SITES. CONTRACTOR SHALL OBTAIN ANY AVAILABLE INFORMATION FROM THE OWNER AND/OR FROM THE GEOTECHNICAL ENGINEER RESPONSIBLE FOR CONDUCTING SUCH TESTS. CONTRACTOR IS ADVISED TO OBTAIN SUCH INFORMATION TO ASSIST IN THE PREPARATION OF THE FOUNDATION BEARING STRATA. CONTRACTOR SHOULD NOTE THAT GEOTECHNICAL STUDIES CONDUCTED ON ADJACENT SITES **MAY NOT** BE APPLICABLE TO THE SITE FOR THIS PROJECT AND THAT INTERPRETATION OF EXISTING INFORMATION WITH RESPECT TO ITS APPLICABILITY FOR THIS SITE SHOULD BE MADE BY A QUALIFIED GEOTECHNICAL ENGINEER.
- 5.4. TOP OF FOOTING (T/FTG), BOTTOM OF PIER (B/PIER), TOP OF PIER (T/PIER), AND TOP OF CAP (T/CAP) ELEVATIONS ARE SHOWN ON THE DRAWINGS OR ARE TO BE DETERMINED BY THE CONTRACTOR IN THE FIELD IN ACCORDANCE WITH THE GUIDELINES SET FORTH IN THE DRAWINGS AND SPECIFICATIONS.
- 5.5. BOTTOM OF EXTERIOR FOOTINGS, SHALL BEAR AT A MINIMUM DEPTH OF 1'-0" BELOW FINAL GRADE FOR FROST PROTECTION.
- 5.6. BEARING SURFACES WHERE WATER IS ENCOUNTERED SHALL BE PROTECTED BY 2 INCH MINIMUM THICK CONCRETE MUD MAT OR A MINIMUM 6 INCH THICK LAYER OF CRUSHED STONE PLACED IMMEDIATELY AFTER EXCAVATION. PROVIDE A GEOTEXTILE FILTER BETWEEN CRUSHED STONE AND SURROUNDING SOILS.
- 5.7. FOUNDATION BEARING SURFACES SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER OR QUALIFIED DESIGNEE PRIOR TO PLACEMENT OF FORM WORK OR REINFORCING STEEL. THE GEOTECHNICAL OBSERVER SHALL VERIFY IF THE ACTUAL EXPOSED SUBGRADE IS AS ANTICIPATED IN THE ASSUMPTIONS.
- 5.8. TESTING AND INSPECTION:
- ALL FOUNDATION BEARING STRATA SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO ANY CONCRETE PLACEMENT.
- GEOTECHNICAL ENGINEER SHALL BE THE SOLE JUDGE AS TO SUITABILITY OF ALL FOUNDATION AND/OR SLAB BEARING STRATA.
- FOOTING BEARING ELEVATIONS SHALL BE ADJUSTED IN THE FIELD AS REQUIRED TO MEET THE DESIGN BEARING PRESSURES BY ADDITIONAL EXCAVATION OR COMPACTION AND/OR BACKFILLING OR BY OTHER MEANS ACCEPTABLE TO THE GEOTECHNICAL ENGINEER.
- 5.9. UNACCEPTABLE SOILS: CONTRACTOR SHALL REMOVE AND REPLACE UNACCEPTABLE SOILS AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER. ALL SOILS WITH PLASTICITY INDICES GREATER THAN 15 OF WHICH MORE THAN 10% PASSES A #200 SIEVE SHALL BE REMOVED TO A DEPTH OF NOT LESS THAN 3'-0" OR GREATER AS DIRECTED BY THE GEOTECHNICAL ENGINEER WHERE SUCH MATERIAL OCCURS BELOW FOUNDATIONS.
- 5.10. ROCK EXCAVATION: DENSE SOIL AND PARTIALLY WEATHERED ROCK MAY REQUIRE HEAVY EXCAVATING EQUIPMENT WITH RIPPING TOOLS FOR REMOVAL. CONFINED EXCAVATIONS (FOOTINGS, UTILITY TRENCHES, ETC.) MAY REQUIRE RIPPING TOOLS AND PNEUMATIC HAMMERS.
- 5.11. ENGINEERED FILL: ALL FILL MATERIAL SHALL BE SELECTED IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS. MATERIAL SHALL BE A CLEAN, LOW PLASTIC SOIL WITH A PLASTICITY INDEX LESS THAN 30 (LESS THAN 15 IS PREFERRED), LIQUID LIMIT LESS THAN 50, UNIT WEIGHT OF 120 PCF (5 PCF), AND SHALL NOT CONTAIN MORE THAN 5% BY WEIGHT OF FIBROUS ORGANIC MATERIALS. PARTIALLY WEATHERED ROCK MATERIALS MAY BE USED FOR STRUCTURAL FILL PROVIDED THE MATERIAL CAN BE REDUCED TO MAXIMUM DIMENSIONS OF 6".
- 5.12. COMPACTION: ALL FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS AND COMPACTED TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR (ASTM D-698) EXCEPT THAT THE TOP 12 INCHES UNDER FOUNDATION SHALL BE COMPACTED TO A MINIMUM OF 98 PERCENT STANDARD PROCTOR. MOISTURE SHALL BE CONTROLLED TO WITHIN 3 PERCENT ABOVE OR BELOW OPTIMUM CONTENT.

6.0 CONCRETE:

- 6.1. ALL CONCRETE CLASS A, SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 5000 PSI.
- 6.2. CONCRETE MIX DESIGNS:
- SUBMITTALS: SUBMIT WRITTEN REPORTS OF EACH PROPOSED CONCRETE MIX NOT LESS THAN 15 DAYS PRIOR TO THE START OF WORK. DESIGN MIXES PREPARED MORE THAN **TWELVE (12) MONTHS** PRIOR TO THE DATE OF THE SUBMITTAL ARE **NOT PERMITTED**.
- MIX DESIGNS, INCLUDING WATER CEMENT RATIOS AND SLUMPS, SHALL BE PREPARED IN ACCORDANCE WITH PROJECT SPECIFICATIONS. CEMENT SHALL CONFORM TO ASTM C 150 TYPE II. NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C 33 AND LIGHT WEIGHT AGGREGATE SHALL CONFORM TO ASTM C 330. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED IN ANY CONCRETE.
- 6.3. CURING:
- LIQUID MEMBRANE CURING COMPOUND WITH A MINIMUM 30% SOLIDS CONTENT SHALL BE APPLIED WITHIN TWO (2) HOURS AFTER COMPLETION OF FINISHING TO ALL CONCRETE FLATWORK AND WALLS, U.N.O., OTHER THAN FOOTINGS AND GRADE BEAMS.
- FLOORS IN AREAS RECEIVING QUARRY TILE, CERAMIC TILE AND LIQUID FLOOR HARDENER SHALL BE CURED WITH SPECIFIED DISSIPATING LIQUID MEMBRANE CURING COMPOUND OR WET CURED BY USE OF MOISTURE RETAINING COVER. DISSIPATING CURING COMPOUND SHALL BE THOROUGHLY BROOMED AND WASHED OFF PRIOR TO APPLICATION OF FLOOR FINISH.
- 6.4. USE A NON-CORROSIVE, NON-CHLORIDE ACCELERATING ADMIXTURE IN CONCRETE EXPOSED TO TEMPERATURES BELOW 40 DEGREES. UNIFORMLY HEAT THE WATER AND AGGREGATES TO A TEMPERATURE OF NOT LESS THAN 50 DEGREES. PLACE AND CURE CONCRETE IN ACCORDANCE WITH ACI 306.
- 7.0 REINFORCING STEEL:
- 7.1. REINFORCING SHALL BE DOMESTIC NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60 INCLUDING STIRRUPS AND TIES, EXCEPT THAT REINFORCING WHICH IS REQUIRED TO BE WELDED SHALL CONFORM TO ASTM A706.
- 7.2. FIELD BENDING OF CONCRETE REINFORCING STEEL **IS NOT PERMITTED** WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
- 7.3. WELDED WIRE MAT AND FABRIC SHALL CONFORM TO ASTM A184 AND A185 RESPECTIVELY.

7.0 REINFORCING STEEL (CONT):

- 7.4. ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI SP-66 "ACI DETAILING MANUAL" AND THE "CRSI MANUAL OF STANDARD PRACTICE", LATEST EDITION.
- 7.5. MINIMUM CONCRETE COVER OVER REINFORCING SHALL BE U.N.O.:
- UNFORMED SURFACE CAST AGAINST EARTH 3 IN.
- FORMED SURFACE EXPOSED TO EARTH/WEATHER 2 IN.
- BOTTOM SURFACES OF ELEVATED SLABS 2 IN
- FORMED SLABS AND WALLS NOT EXPOSED TO EARTH/WEATHER USING MAX. #5 BAR 3/4 IN.
- d. ALL OTHER FORMED ELEMENTS NOT EXPOSED TO EARTH/WEATHER 1-1/2 IN.
- 7.6. CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. WHERE NOT SHOWN, SUBMIT PROPOSED CONSTRUCTION JOINT LOCATION.
- 7.7. DOWELS, ANCHOR BOLTS, PIPES AND OTHER EMBEDDED ITEMS SHALL BE HELD SECURELY IN POSITION WHILE CONCRETE IS BEING PLACED.
- 7.8. CONDUITS AND PIPES EMBEDDED IN OR PENETRATING THROUGH CONCRETE SHALL BE SPACED ON CENTER NOT LESS THAN 3 TIMES THEIR OUTSIDE DIMENSION, BUT NOT LESS THAN 2 ½ INCHES CLEAR. OUTSIDE DIMENSION OF EMBEDDED ITEMS SHALL NOT EXCEED 1/3 OF THE CONCRETE MEMBER THICKNESS. CLEAR SPACING REQUIREMENTS SHALL APPLY FOR EMBEDDED CONDUITS OR PIPES CROSSING AT AN ANGLE LESS THAN 60 DEGREES.
- 7.9. EMBEDDED CONDUITS AND PIPES SHALL BE LOCATED BETWEEN THE LAYERS OF REINFORCEMENT AND A MINIMUM OF 2 ½ INCHES CLEAR FROM APPROXIMATELY PARALLEL REINFORCING BARS. REQUIREMENTS FOR EMBEDDED ELEMENTS CROSSING REINFORCING BARS SHALL BE AS REQUIRED FOR CROSSING EMBEDDED ELEMENTS.
- 7.10. CONDUITS AND PIPES SHALL NOT BE EMBEDDED IN OR PASS THROUGH COLUMNS OR BEAMS UNLESS INDICATED OTHERWISE OR AUTHORIZED BY THE OWNER.
- 7.11. REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY METAL PIPE, PIPE FLANGE, METAL CONDUIT OR OTHER METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM CLEARANCE OF 2 INCHES SHALL BE PROVIDED.
- 7.12. PROVIDE ¾ INCH CHAMFER USING WOOD CHAMFER STIRRUPS ON ALL EXPOSED CORNERS OF COLUMNS, BEAMS AND WALLS OR AS REQUIRED TO MATCH DRAWINGS.
- 7.13. LAP SPLICES SHALL BE IN ACCORDANCE WITH THE TABLE SHOWN IN THE DRAWING.
- 7.14. 90 DEGREE BENDS, UNLESS OTHERWISE NOTED SHALL BE ACI 530 STANDARD HOOKS.
- 7.15. LOCATE SLAB AND BEAM TOP BAR SPLICES AT MID SPAN AND BOTTOM BAR SPLICES AT SUPPORTS.
- 7.16. REINFORCING STEEL FOR FOOTINGS AND SLABS ON GRADE SHALL BE ADEQUATELY SUPPORTED ON BAR SUPPORTS WITH SPACERS TO KEEP REINFORCING ABOVE THE PREPARED GRADE. LIFTING REINFORCING OFF GRADE DURING CONCRETE PLACEMENT IS NOT PERMITTED.
- 7.17. A CLASS "B" SPLICE IS REQUIRED WHEREVER ALL REINFORCING BARS CROSSING A SECTION ARE SPLICED.
- 7.18. REINFORCING BARS SHALL BE WELDED ONLY WHERE SHOWN ON THE STRUCTURAL DRAWINGS AND WELDS SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE - REINFORCING STEEL" (AWS D1.4). NO OTHER REINFORCING MAY BE WELDED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER. TACK WELDING OF ANY REINFORCING IS **STRICTLY PROHIBITED**.
- 7.19. WELDED WIRE MAT/FABRIC SHALL BE LAPPED 1'-0" AT ALL SPLICES.
- 7.20. ALL REINFORCING TERMINATING AT THE TOPS OF COLUMNS AND PILASTERS SHALL BE HOOKED, U.N.O.
- 7.21. SUBMIT SHOP DRAWINGS FOR FABRICATION, BENDING, AND PLACEMENT OF CONCRETE REINFORCEMENT. COMPLY WITH ACI DETAILING MANUAL (SP-66) SHOWING BAR SCHEDULES, STIRRUP SPACING, DIAGRAMS OF BENT BARS, ARRANGEMENT OF CONCRETE REINFORCEMENT. INCLUDE SPECIAL REINFORCEMENT REQUIRED AT OPENINGS THROUGH CONCRETE STRUCTURES. INCLUDE ALL ACCESSORIES SPECIFIED/REQUIRED TO SUPPORT REINFORCING.
- 7.22. SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMISSION. DRAWINGS SHALL BEAR THE CONTRACTOR'S APPROVAL STAMP ACCEPTING RESPONSIBILITY FOR DIMENSIONS, QUANTITIES AND COORDINATION WITH THE OTHER TRADES.
- 7.23. CONTRACTOR SHALL PROVIDE IN HIS SCHEDULE FOR A SHOP DRAWING REVIEW AND RETURN TIME OF A **MINIMUM OF FIFTEEN (15) WORKING DAYS** IN THE STRUCTURAL ENGINEER'S OFFICE.

CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER A **MINIMUM OF 48 HOURS** PRIOR TO ALL CONCRETE POURS IN ORDER TO PERMIT REINFORCING STEEL REVIEW IF REQUIRED BY THE STRUCTURAL ENGINEER.

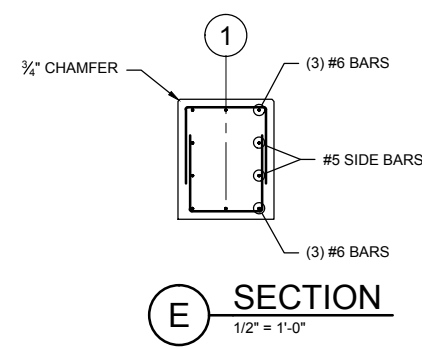
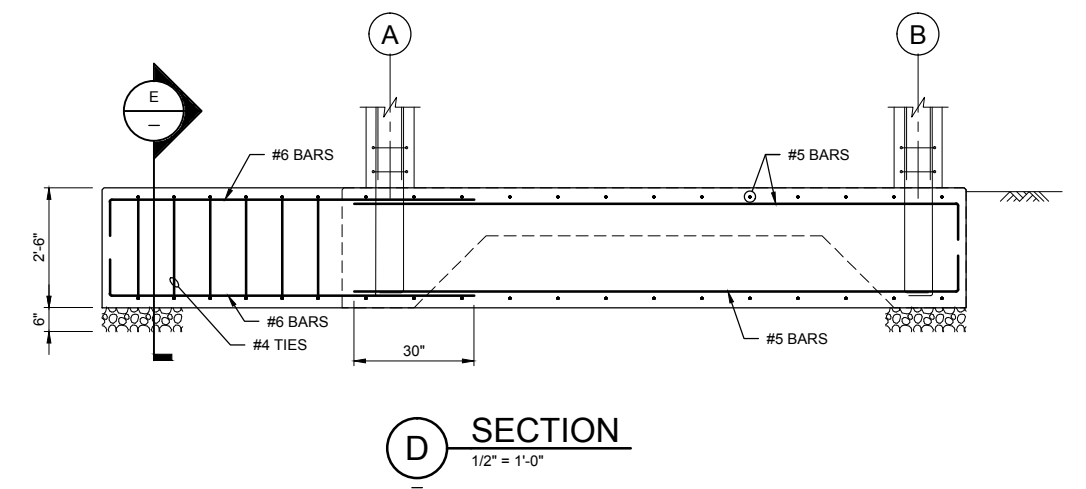
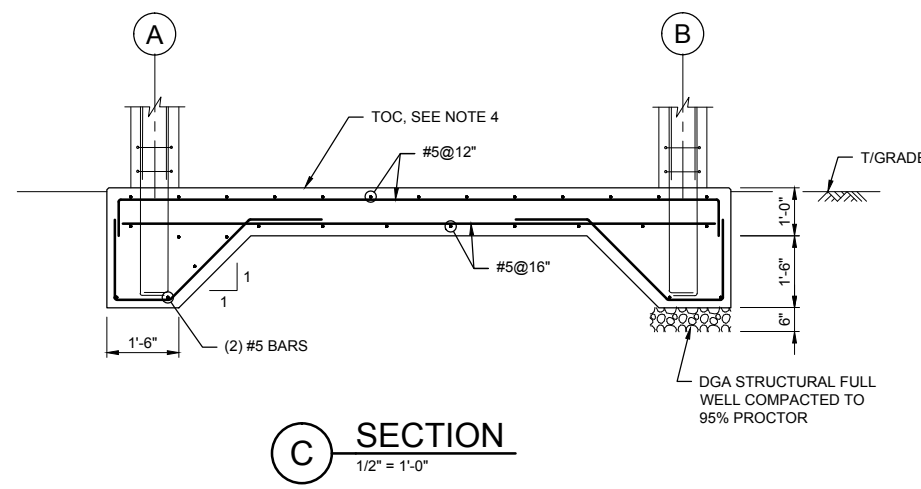
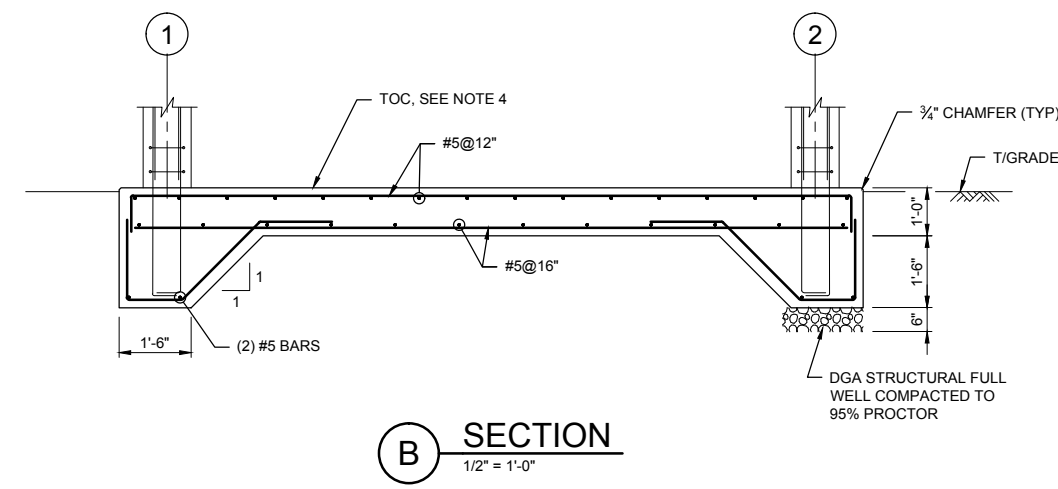
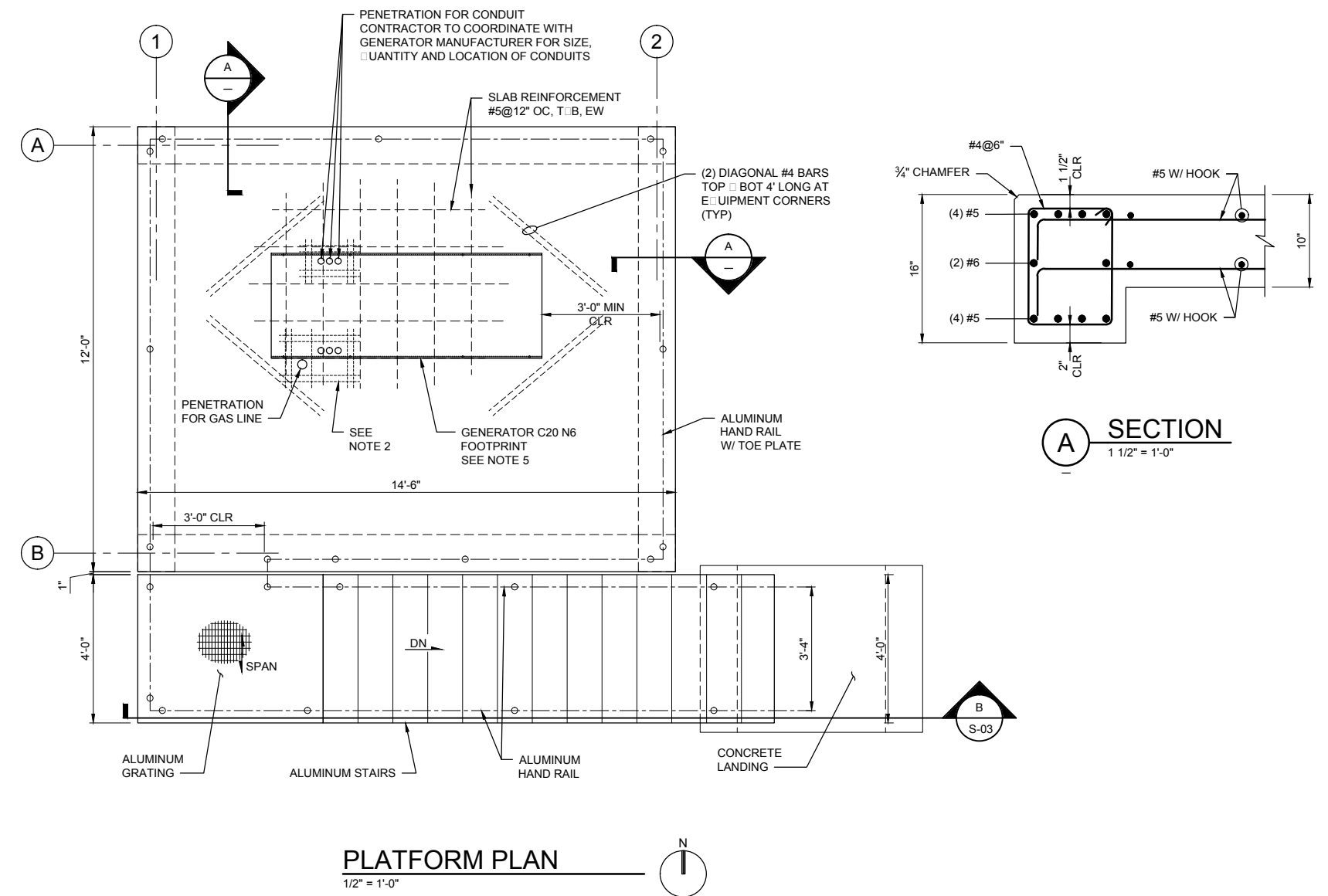
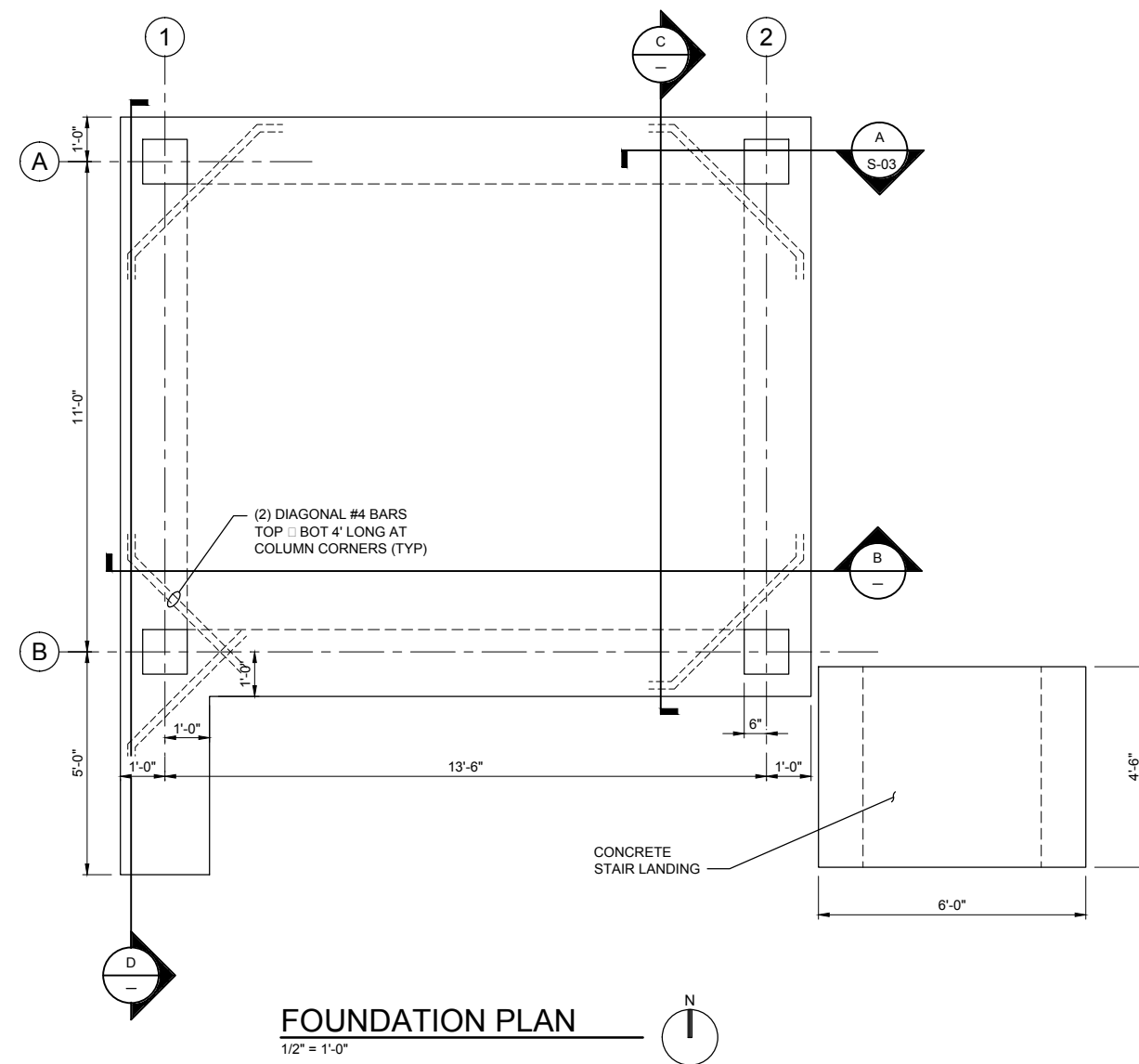
10.0 SPECIAL INSPECTIONS:

- 10.1. THE FOLLOWING ITEMS SHALL BE SUBJECT TO SPECIAL INSPECTION MADE AND WITNESSED BY OR UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. TEST REPORTS, CERTIFICATES OF INSPECTION SHALL BE PREPARED AND FILES WITH THE DEPARTMENT OF INSPECTIONS.
- SHORING, BRACING, STRUCTURAL STABILITY
- SUBGRADE PREPARATION
- CONCRETE INSPECTION PER SPECIFICATION
- d. CONCRETE ANCHORS AND ANCHOR BOLTS
- STEEL INSPECTION PER SPECIFICATION.
- 10.1. THE DESIGNATED INSPECTING AGENCY FOR SPECIAL INSPECTION SHALL PERFORM ONSITE INSPECTION IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE WITH GEORGIA AMENDMENTS, UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF GEORGIA.
- 10.2. THE DESIGNATED INSPECTING AGENCY IS RESPONSIBLE FOR ALL REQUIRED TESTING AND INSPECTIONS. INCLUDING SPECIAL INSPECTIONS. THE SPECIAL INSPECTION ENGINEER ARE RESPONSIBLE FOR FILING AND RETAINING APPROVAL OF ALL STATEMENTS, TEST AND INSPECTION REPORTS INCLUDING STEEL AND CONCRETE PRODUCER'S CERTIFICATES.
- 10.3. NOTIFY THE SPECIAL INSPECTION ENGINEERS AT LEAST 48 HOURS PRIOR TO START OF WORK.
- 10.4. THE TESTING AGENCY SHALL VERIFY THAT ALL WELDERS HAVE SATISFACTORILY PASSED AWS QUALIFICATION TESTS FOR THE WELDS WHICH THEY WILL PERFORM.
- 10.5. THE CONTRACTOR AND TESTING AGENCY SHALL REQUIRE THAT AWS QUALIFICATION TESTS FOR WELDING OF MATERIAL LESS THAN 1/8" IN THICKNESS ARE SATISFACTORILY PASSED BY WELDERS EXPECTED TO ERECT LIGHTGAGE FRAMING MATERIALS. THESE TESTS ARE NOT THE SAME AS FOR MATERIALS 1/8" OR GREATER IN THICKNESS (I.E. STRUCTURAL STEEL MATERIALS)
- 10.6. ALL WELDING SHALL BE INSPECTED AND TESTED IN ACCORDANCE WITH AWS D1.1 OR D1.3 AS APPROPRIATE TO THE MATERIAL THICKNESS.

11.0 CONSTRUCTION AND SAFETY:

- 11.1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SAFETY REGULATIONS, PROGRAMS AND PRECAUTIONS RELATED TO ALL WORK ON THIS PROJECT.
- 11.2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF PERSONS AND PROPERTY EITHER ON OR ADJACENT TO THE PROJECT AND SHALL PROTECT SAME AGAINST INJURY, DAMAGE OR LOSS.
- 11.3. MEANS AND METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIALS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
- 11.4. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED IN CONJUNCTION WITH THE DRAWINGS OF OTHER CONSULTANTS AND TRADES. THE CONTRACTOR SHALL COORDINATE THE VARIOUS REQUIREMENTS.
- 11.5. NO OPENINGS NOR ANY CHANGES IN SIZE, DIMENSION OR LOCATION SHALL BE MADE IN ANY STRUCTURAL ELEMENTS WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
- 11.6. OPENINGS 1'-0" OR LESS ON A SIDE ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO DRAWINGS OF OTHER CONSULTANTS FOR SUCH OPENINGS.
- 11.7. THE CONTRACTOR SHALL INFORM THE STRUCTURAL ENGINEER, CLEARLY AND EXPLICITLY IN WRITING, OF ANY DEVIATION OR SUBSTITUTION OF REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONTRACTOR IS NOT RELIEVED OF ANY REQUIREMENTS OF THE CONTRACT DOCUMENTS BY VIRTUE OF THE STRUCTURAL ENGINEER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS THE CONTRACTOR HAS CLEARLY AND EXPLICITLY INFORMED THE STRUCTURAL ENGINEER IN WRITING OF ANY DEVIATIONS OR SUBSTITUTIONS AT TIME OF SUBMISSION, AND THE STRUCTURAL ENGINEER HAS GIVEN WRITTEN APPROVAL FOR THE SPECIFIC DEVIATIONS OR SUBSTITUTIONS.
- 11.8. ALL THINGS WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS OR AMBIGUITIES IN THE DRAWINGS OR SPECIFICATIONS, SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER. CORRECTIONS OR WRITTEN INTERPRETATIONS SHALL BE ISSUED BEFORE AFFECTED WORK MAY PROCEED.
- 11.9. IF THE CONTRACTOR CANNOT CONSTRUCT ANY PORTION OF THE WORK IDENTIFIED IN THE DRAWINGS IN ACCORDANCE WITH THESE DRAWINGS AND SPECIFICATIONS, THEN THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH THE WORK. WORK THAT DOES NOT COMPLY WITH THE DRAWINGS MAY REQUIRE REMOVAL, TESTING, OR ENGINEERING EVALUATION AT THE CONTRACTOR'S EXPENSE.
- 11.10. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH NEW WORK IN AREAS AFFECTED BY EXISTING CONDITIONS. STRUCTURAL ENGINEER SHALL BE INFORMED IN WRITING OF CONFLICTS BETWEEN EXISTING AND PROPOSED NEW CONSTRUCTION.
- 11.11. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS. INCONSISTENCIES ON THE STRUCTURAL DRAWINGS OR BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER CONTRACT, SHOP, FABRICATION, OR OTHER DRAWINGS OR INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH AFFECTED WORK.
- 11.12. DO NOT SCALE THESE DRAWINGS, USE THE DIMENSIONS SHOWN.

<div><div><div><div>ch2m ROH&DFOX</div><div>676886</div><div>WW-S-01_676886.dwg</div><div>S-01</div></div><div><div>811</div><div>Know what's below. Call before you dig.</div></div></div></div>	DRAWING IS TO BE CONSIDERED PRELIMINARY UNLESS APPROVED											
	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES								
	NO.	DATE	DESCRIPTION									
ENGINEER OF RECORD			SURVEYOR			FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE	
			FULTON			NTS						
			DRAWN BY		DESIGNED BY		CHECKED	BY	APPROVED	BY	DATE	
			M LEGGETT		P MANCHENO						AUG 2017	
			PROJECT NUMBER:						SHEET 17 OF 41			



- NOTES:**
1. SEE GENERAL NOTES DRAWING B-11 FOR ADDITIONAL INFORMATION.
 2. PROVIDE ADDITIONAL REINFORCEMENT AT EACH SIDE OF ALL PENETRATIONS. ADDITIONAL REINFORCEMENT TO MATCH SIZE OF TYPICAL REINFORCEMENT (MIN 2 BAR EACH SIDE AND EACH F11) AND PLACED BETWEEN TYPICAL REINFORCEMENT AT 3" SPACING ON EACH SIDE OF OPENING.
 3. PROVIDE STANDARD HOOK AT END OF ALL BARS TERMINATING AT OPENING.
 4. CONTRACTOR TO INSTALL FOUNDATION WITH TOP OF CONCRETE ELEVATION AT 1-INCH ABOVE EXISTING GRADE. CONTRACTOR SHALL INDICATE IN THE TOP OF CONCRETE ELEVATION FOR THE FOUNDATION IN THE AS BUILT DRAWINGS. TOP OF PLATFORM ELEVATION SHALL REMAIN AS SHOWN IN THE DRAWINGS.
 5. CONTRACTOR SHALL COORDINATE THE GENERATOR FINAL LOCATION WITH THE ENGINEER AND MANUFACTURER.

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A joint venture

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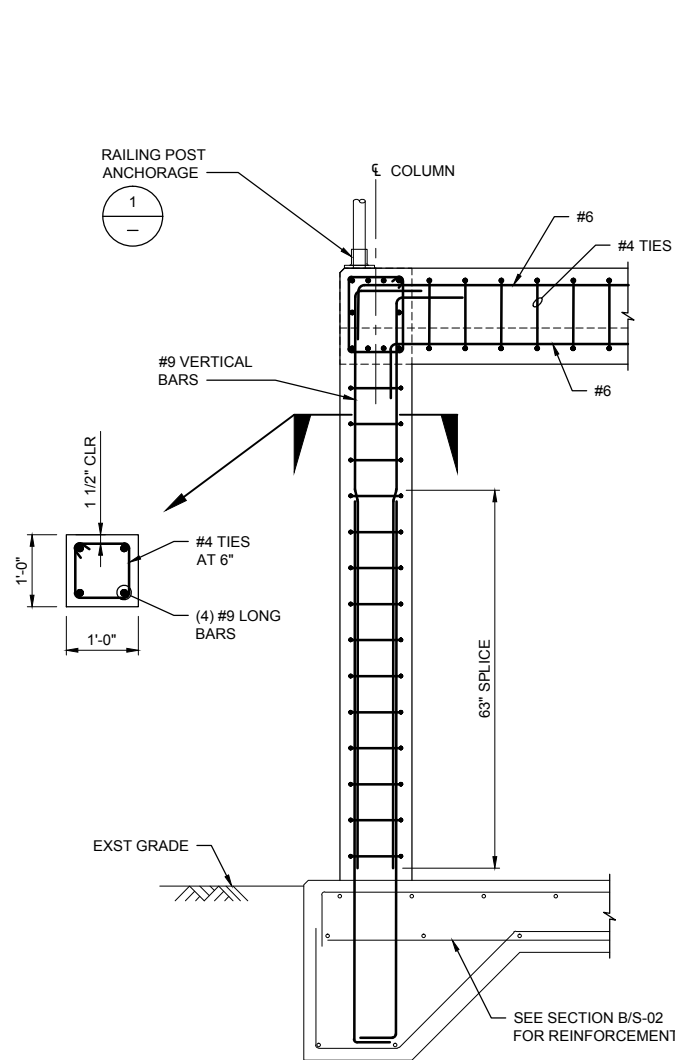
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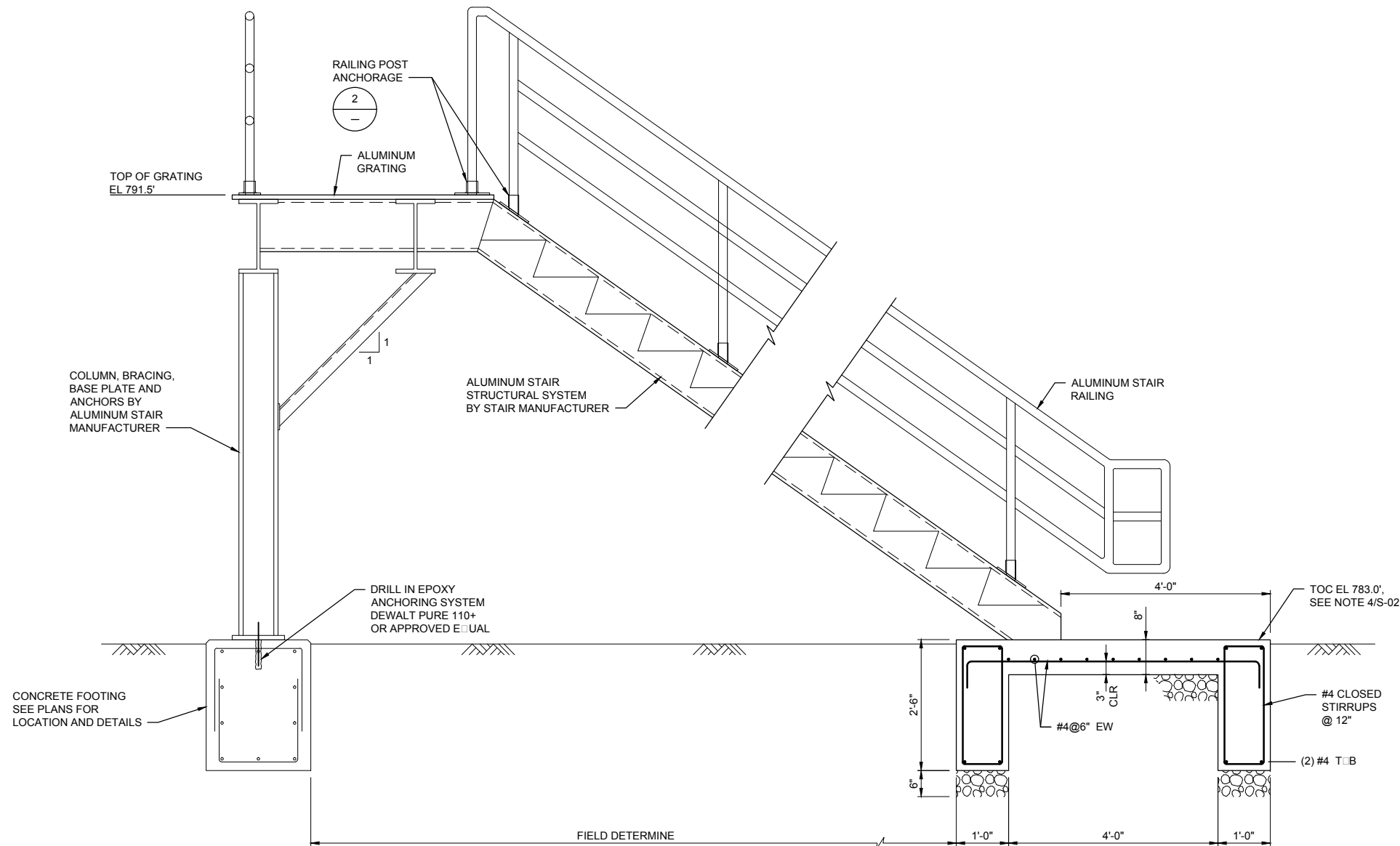
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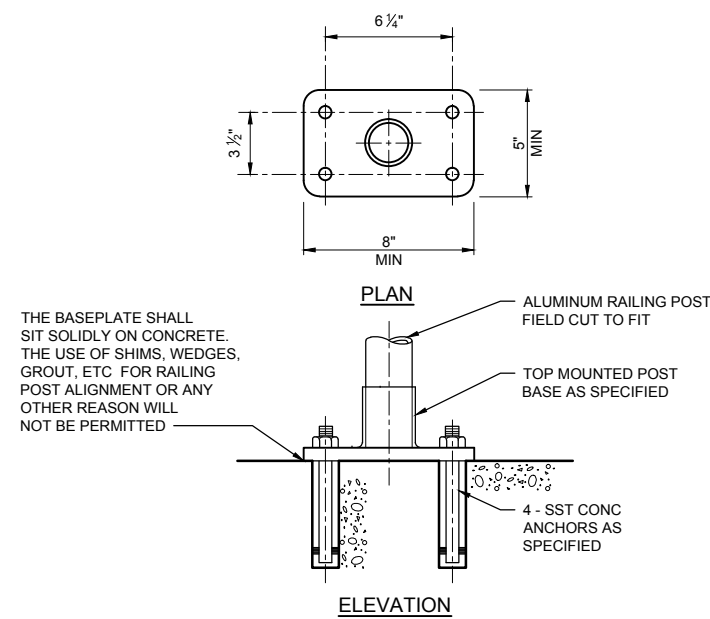
DRAWING IS TO BE CONSIDERED PRELIMINARY UNLESS APPROVED									
ENGINEER OF RECORD	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES					
	N.O.	DATE	DESCRIPTION						
			WOODWARD WAY SEWER IMPROVEMENTS GENERATOR PLATFORM PLANS <input type="checkbox"/> SECTIONS						
			SURVEYOR	FIELD BOOKS	L.L.	DIST.	COUNTY FULTON	SCALE AS NOTED	
			DRAWN BY M. LEGGETT	DESIGNED BY P. MANCHENO	CHECKED BY	APPROVED BY	DATE AUG 2017		
			PROJECT NUMBER:				SHEET OF 41		



A SECTION AT COLUMN
3/4" = 1'-0"
S-02

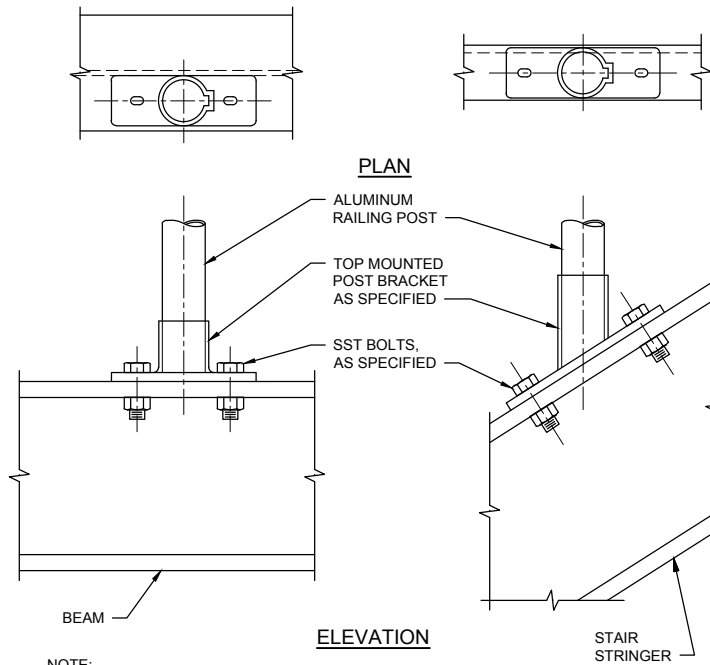


B SECTION AT ALUMINUM STAIR
3/4" = 1'-0"
S-02



NOTE: PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.

1 DETAIL
NTS



NOTE: PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE PER SPECIFICATIONS.

2 DETAIL
NTS

ch2m | **ROH&D FOX**
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DRAWING IS TO BE CONSIDERED PRELIMINARY UNLESS APPROVED									
CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES									
WOODWARD WAY SEWER IMPROVEMENTS GENERATOR PLATFORM SECTIONS & DETAILS									
SURVEYOR	FIELD	BOOKS	L.L.	DIST.	COUNTY	FULTON	SCALE	AS NOTED	
DRAWN BY M. LEGGETT	DESIGNED BY P. MANCHENO	CHECKED BY	APPROVED BY	DATE AUG 2017					
ENGINEER OF RECORD		PROJECT NUMBER:				SHEET 19 OF 41			

CERTIFICATION STATEMENTS

DESIGN PROFESSIONAL

- ☒11
1. I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION.
- ☒12
2. I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100002.
- ☒13
3. I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STEAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100002, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER.
- ☒14
4. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMP WITHIN 7 DAYS AFTER INSTALLATION.

NAME: CHRISTOPHER S. HAMBLÉN, P.E.

GEORGIA REGISTERED ENGINEER NO: 038034

LEVEL II CERTIFIED DESIGN PROFESSIONAL NO: 0000069253

SIGNATURE:

PRIMARY PERMITTEE

- ☒4
1. I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT CERTIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.
- NAME :
- REGINALD CRAYTON
- COMPANY:
- CITY OF ATLANTA, DEPARTMENT OF WATERSHED MANAGEMENT
- ADDRESS:
- 72 MARIETTA STREET NW
- CITY/ST/ZIP:
- ATLANTA, GA 30303
- PHONE:
- (404) 798-5612

PROJECT INFORMATION

- ☒3
1. 24-HOUR CONTACT
NAME: REGINALD CRAYTON
PHONE NUMBER: (404) 798-5612
- ☒6
2. GPS LOCATIONS OF PROJECT (WGS84)
BEGINNING: (33.822849, -84.412999)
END: (33.820575, -84.407857)
- ☒5
3. AREAS:
PROJECT AREA: 1.19 ACRES
ANTICIPATED AREA TO BE DISTURBED: 1.19 ACRES
- ☒8
4. PROJECT DESCRIPTION:
WOODWARD WAY IS A SANITARY SEWER INSTALLATION PROJECT IN ATLANTA, GA ALONG WOODWARD WAY NW THAT IS INTENDED TO RELIEVE SURCHARGING AND PROVIDE ADDITIONAL CAPACITY IN THE EXISTING SEWER NETWORK. THIS WILL BE ACCOMPLISHED BY INSTALLING 2,000 LF OF NEW 8-INCH DUCTILE IRON GRAVITY SEWER LINE VIA OPEN TRENCH METHODS AND CONSTRUCTION OF A NEW PUMP STATION. INCLUDED IN THIS PROJECT IS THE REMOVAL OF AN AERIAL SEWER CROSSING AND ITS PIERS ACROSS PEACHTREE CREEK.
- ☒10
5. RECEIVING WATERS
-THE RECEIVING WATERS OF THIS PROJECT IS PEACHTREE CREEK, WHICH IS PART OF THE UPPER CHATTAHOOCHEE WATERSHED (HUC-03130001).
-PEACHTREE CREEK IS AN IMPAIRED STREAM SEGMENT AS DEFINED IN THE DRAFT 2016 GEORGIA EPD 305(B)/303(D) LIST DUE TO FECAL COLIFORM WATER QUALITY CRITERIA VIOLATIONS.
-A TMDL IMPLEMENTATION PLAN FOR SEDIMENT HAS NOT BEEN FINALIZED FOR THIS STREAM SEGMENT.
- ☒22
6. BASE FLOOD INFORMATION:
100-YEAR FLOOD ELEVATION: PEACHTREE CREEK, 787' TO 788'
MAP NUMBER: 13121C0233F
PANEL NUMBER: 0233F
REVISED: SEPTEMBER 18, 2013
- ☒46
7. SOILS TYPE:
AS PER NRCS SOIL DATA MART, SOIL TYPES FOR THIS PROJECT ARE DELINEATED ON SHEETS CE-08 THROUGH CE-10. SOIL TYPE LEGEND, WITH DESCRIPTIONS, IS PROVIDED ON SHEET CE-02.
- ☒41
8. WETLANDS
THE PRESENCE OF ON-SITE WETLANDS HAS BEEN INVESTIGATED AND IT WAS DETERMINED THAT THERE ARE NO WETLANDS PRESENT WITHIN THE PROJECT AREA.
- ☒40
9. STATE WATERS
ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE HAVE BEEN IDENTIFIED AND WILL BE PROTECTED BY ASSOCIATED STATE AND COUNTY PROTECTION REGULATIONS AND BUFFERS. PLEASE REFER TO DRAWING C-08 THROUGH CE-10 FOR DELINEATED STATE WATERS OVERVIEW.
- ☒44
10. RUNOFF COEFFICIENT OR PEAK DISCHARGE FLOWS OF THE SITE PRIOR TO AND AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED SHALL STAY THE SAME. THE PROPOSED WORK DOES NOT ALTER THE HYDROLOGY OF THE SITE.
- ☒48
11. THE TOPOGRAPHY OF THE SITE, AS WELL CONSTRUCTION TECHNIQUES, LIMITS THE LAND DISTURBANCE ACTIVITIES TO A NARROW LINEAR AREAS. THIS ELIMINATES THE OPPORTUNITY TO USE A CENTRALIZED SEDIMENT STORAGE BMP TO ADUATELY TREAT SEDIMENT POLLUTION. TO MEET THE GOALS OF LIMITING SEDIMENT POLLUTION, THE SEDIMENT CONTROL PROGRAM WILL BE EXECUTED BY THE CONTRACTOR IN COORDINATION WITH LIMITING LAND DISTURBANCE.

GENERAL NOTES:

1. ALL PERIMETER EROSION AND SEDIMENT CONTROL DEVICES AND ORANGE BARRIER FENCE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF SITE WORK AND REMAIN UNTIL COMPLETION OF WORK. CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE DAMAGED ITEMS. THE CONTRACTOR SHALL INSPECT FENCE DAILY AND AFTER EVERY RAIN EVENT. ACCUMULATED SILT SHALL BE REMOVED AS SOON AS PRACTICAL, BUT NO LATER THAN WHEN FENCE IS HALF FULL.
2. EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
3. SOIL DISTURBING ACTIVITIES WILL INCLUDE: PLACEMENT OF EROSION AND SEDIMENT 3. SOIL DISTURBING ACTIVITIES WILL INCLUDE: PLACEMENT OF EROSION AND SEDIMENT CONSTRUCTION, TRENCH EXCAVATION AND BACKFILL, AND SURFACE RESTORATION.
4. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL MEASURES INSTALLED IN GOOD WORKING ORDER FOR THE FULL DURATION OF THIS CONTRACT.
5. EROSION, SEDIMENT AND POLLUTION CONTROL MEASURES SHALL BE PROVIDED AS SHOWN AND ARE THE MINIMUM REQUIRED. ADDITIONAL DEVICES MAY BE REQUIRED AS NECESSARY DURING CONSTRUCTION.
6. CONTRACTOR SHALL INSTALL AND ADD TO EROSION CONTROL MEASURES AS DETERMINED BY THE ENGINEER, OWNER OR THE CITY.
7. PROVISIONS TO PREVENT EROSION OF SOIL FROM THE SITE SHALL BE, AT A MINIMUM, IN CONFORMANCE WITH THE REQUIREMENTS OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, CURRENT EDITION. THIS DESIGN SHALL CONFORM TO AND ALL WORK WILL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THIS PUBLICATION.
8. CONSTRUCTION EXITS (Co) SHALL BE REQUIRED AT ALL LOCATIONS USED FOR INGRESS/EGRESS FROM THE CONSTRUCTION AREA. CONSTRUCTION MATERIAL STORAGE AREAS WILL REQUIRE THE INSTALLATION OF A CONSTRUCTION EXIT TO REDUCE OR ELIMINATE THE TRANSPORT OF MUD FROM THE AREA. SILT FENCE SHALL ALSO BE OR THE SILT FENCE SHALL REMAIN UNTIL THE AREA IS PERMANENTLY STABILIZED. AFTER DEMOBILIZATION, THE MATERIAL STORAGE AREA SHALL BE SEEDED AND MULCHED, AND INSTALLED TO PREVENT SEDIMENT FROM LEAVING THE MATERIAL STORAGE AREA.
9. CONSTRUCTION DEBRIS (INCLUDING CONCRETE WASHOUT) SHALL BE PROPERLY DISPOSED OF OFFSITE IN LICENSED LANDFILLS OR LOCATIONS THAT ARE APPROVED BY FEDERAL, STATE, AND LOCAL AUTHORITIES. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
10. NO BURN OR BURY PITS SHALL BE PERMITTED ON THE SITE WITHOUT THE EXPRESS WRITTEN AUTHORIZATION OF THE SITE OWNER AND/OR THE ENGINEER OF RECORD.
11. A TEMPORARY COVER OF HEAVY MULCH OR MULCH WITH TEMPORARY SEEDING SHALL BE PLACED ON ALL AREAS WHERE PERMANENT COVER CAN NOT BE ESTABLISHED IMMEDIATELY DUE TO SEASONAL LIMITATIONS.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT UNDER NO CIRCUMSTANCES ANY SEDIMENT, TRASH, OR DEBRIS BE ALLOWED ONTO ADJACENT PROPERTIES, PUBLIC LANDS, OR OUTSIDE OF THE CONSTRUCTION LIMITS.
13. ALL EROSION CONTROL DEVICES, THAT ARE NOT DIRECTLY SPECIFIED AS TO INSTALLATION AND MATERIALS, SHALL MEET THE REQUIREMENTS OF THE GA. DEPT. OF TRANSPORTATION, SPECIFICATIONS FOR THE CONSTRUCTION OF ROADS AND BRIDGES, CURRENT EDITION, AND LATEST SUPPLEMENT IN EFFECT AT THE TIME OF BID OPENING OR THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, CURRENT EDITION
14. ACCEPTANCE AND/OR SUBSEQUENT ACCEPTANCE OF THESE PLANS DOES NOT CONSTITUTE APPROVAL BY COA OF ANY LAND DISTURBING ACTIVITIES WITHIN WETLAND AREAS, JURISDICTIONAL WATERS OF THE STATE, AREAS OF THREATENED/ENDANGERED SPECIES, OR AREAS OF HISTORICAL SIGNIFICANCE. IT IS THE OWNER'S RESPONSIBILITY CONTACT THE APPROPRIATE REGULATORY AGENCY FOR ANY REQUIRED APPROVALS.
15. A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE AT ALL TIMES.

ANTICIPATED CONSTRUCTION SCHEDULE

ACTIVITY	MONTH			
	1	2	3	4
INITIAL PHASE BMPs				
TEMPORARY VEGETATION				
INFRASTRUCTURE CONSTRUCTION				
FINE GRADING, LANDSCAPING AND PAVEMENT REPLACEMENT				
REMOVE TEMPORARY EROSION CONTROL				
MAINTENANCE OF BMPs				

NOTIFICATIONS

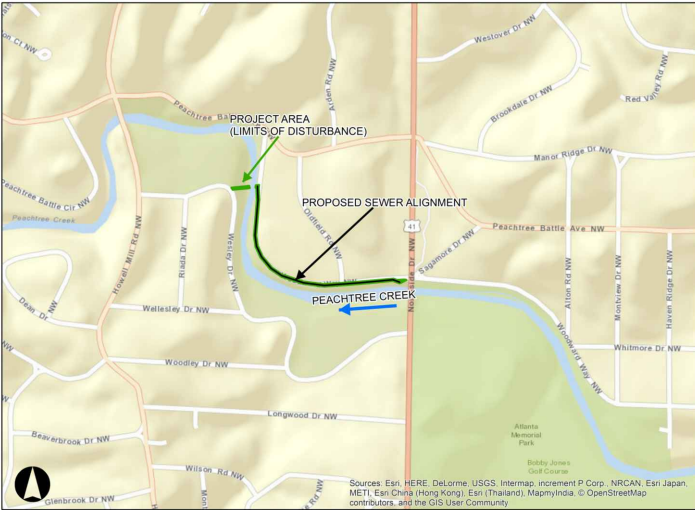
1. NOTIFY ENGINEER AND OWNER 72 HOURS PRIOR TO THE BEGINNING OF EVERY PHASE OF CONSTRUCTION.
2. PROVIDE BMP'S FOR REMEDIATION OF ALL PETROLEUM SPILLS AND LEAKS.

REQUIRED NOTES

- ☒15
1. NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.
- ☒16
2. BUFFER ENCROACHMENTS
2.1. THE PROJECT REQUIRES WORK WITHIN THE DELINEATED 25-FOOT GAEPD STREAM BUFFER. THE EXTENT OF BUFFER IMPACT IS SHOWN IN SHEET CE-10.

2.2. PERMITS FOR ENCROACHMENT THE FOLLOWING PERMITS ARE REQUIRED FOR CONSTRUCTION OF THIS PROJECT: GEORGIA EPD STREAM BUFFER VARIANCE (PERMIT APPLICATION IN DEVELOPMENT)
- ☒17
3. AMMENDMENTS / REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
3.1. THE PRIMARY PERMITTEE, AS APPLICABLE, SHALL AMEND THEIR PLANS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT.

3.2. ALL REVISIONS OR AMENDMENTS SHALL BE SUBMITTED TO THE LOCAL ISSUING AUTHORITY FOR REVIEW.
- ☒18
4. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
4.1. INCLUDING BUT NOT LIMITED TO WASTE BUILDING MATERIALS, CONSTRUCTION AND DEMOLITION DEBRIS, CONCRETE WASHOUT OR EXCAVATED SEDIMENT.
- ☒19
5. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
- ☒20
6. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- ☒21
7. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.



VICINITY MAP



43 42 DRAINAGE AREA MAP

ch2m

ROH&D

FOX

a joint venture

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GSWCC

Georgia Soil and Water
Conservation Commission

Christopher Hamblen

Level II Certified Design Professional

Certification Number: 0000069253

Expires: 08-21-2019

Issued: 08-21-2015

DRAWING IS TO BE CONSIDERED PRELIMINARY UNLESS APPROVED											
REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES								
NO.	DATE	DESCRIPTION	WOODWARD WAY SEWER IMPROVEMENTS EROSION CONTROL NOTES								
			SURVEYOR	FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE		
			DRAWN BY D CORBETT	DESIGNED BY T SMITH	CHECKED BY C HAMBLÉN			FULTON	NTS		
										DATE AUG 2017	
ENGINEER OF RECORD			PROJECT NUMBER:						SHEET OF 41		

A. THIS PLAN HAS BEEN PREPARED TO MEET THE REQUIREMENTS UNDER THE STATE OF GEORGIA, DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION DIVISION (EPD), GENERAL PERMIT NO. G000 FOR AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FOR STAND ALONE DEVELOPMENTS.

B.1. BEST MANAGEMENT PRACTICES ARE REQUIRED FOR ALL CONSTRUCTION ACTIVITIES AND MUST BE IMPLEMENTED IN ACCORDANCE WITH THE DESIGN SPECIFICATIONS CONTAINED IN THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN CONCRETE PAVING" (2003) AND THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GRAVEL PAVING" (2003). THE MAINTENANCE OF BMP'S SHALL CONSTITUTE A COMPLETE DEFENSE TO ANY ACTION BY THE DIRECTOR OR TO ANY OTHER ALLEGATION OF NONCOMPLIANCE WITH PART II.D.3 AND PART II.D.4.

B.2. FAILURE TO PROPERLY DESIGN, INSTALL, OR MAINTAIN BMP'S SHALL CONSTITUTE A VIOLATION OF THE PERMIT ROUTINE INSPECTIONS AND VIOLATIONS SECTION. THE COURSE OF THE PERMITTEE'S ROUTINE AND PERIODIC INSPECTIONS BMP FAILURES ARE OBSERVED WHICH HAVE RESULTED IN SEDIMENT DEPOSITION INTO WATERS OF THE STATE, THE PERMITTEE SHALL CORRECT THE BMP FAILURES AND SHALL SUBMIT A SUMMARY OF THE VIOLATIONS TO EPD IN ACCORDANCE WITH PART V.A.2 OF THE PERMIT.

B.3. ANY DISCHARGE OF TURBID WATER FROM DISTURBED AREAS WHERE BMP'S HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH DISCHARGE RESULTS IN THE TURBIDITY OF RECEIVING WATER(S) BEING INCREASED BY MORE THAN TEN (10) NEPHELOMETRIC TURBIDITY UNITS FOR WATERS CLASSIFIED AS TROUT STREAMS OR MORE THAN TWENTY-FIVE (25) NEPHELOMETRIC TURBIDITY UNITS FOR WATERS CLASSIFIED AS TROUT OR WARM WATER FISHES, REGARDLESS OF THE PERMITTEE'S CERTIFICATION UNDER PART II.B.1., AND PART II.B.3..

C.1. ALL DISCHARGES OF STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY THAT WILL RESULT IN LAND DISTURBANCE EQUAL TO OR GREATER THAN ONE ACRE. PART I.C.1.

C.2. ALL DISCHARGES COVERED BY THIS PERMIT SHALL BE COMPOSED ENTIRELY OF STORM WATER EXCEPT AS PROVIDED IN PART I.C.2 AND PART III.A.2 OF THE PERMIT. PART III.A.1.

C.3.1. THE INDUSTRIAL SOURCE OR ACTIVITY OTHER THAN CONSTRUCTION IS LOCATED ON THE SAME SITE AS THE CONSTRUCTION ACTIVITY WHICH IS AN INTEGRAL PART OF THE CONSTRUCTION ACTIVITY.

C.3.2. THE DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES ARE OCCURRING ARE IN COMPLIANCE WITH THE TERMS OF THE PERMIT.

C.3.3. STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE AREAS OF THE SITE WHERE INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION ARE OCCURRING ARE COVERED BY A DIFFERENT NPDES GENERAL PERMIT OR INDIVIDUAL PERMIT AUTHORIZING SUCH DISCHARGES AND THE DISCHARGES ARE IN COMPLIANCE WITH A

WATER COMPONENT OF THE DISCHARGE IS EXPLICITLY IN THE PLAN AND IS IN COMPLIANCE WITH PART IV.D.7: PART III.A.2.

C.4.1. FIRE FIGHTING ACTIVITIES ☐

C.4.2. FIRE HYDRANT FLUSHING ☐

C.4.3. POTABLE WATER SOURCES INCLUDING WATER LINE FLUSHING ☐

C.4.4. IRRIGATION DRAINING ☐

C.4.5. AIR CONDITIONING CONDENSATE ☐

C.4.6. SPRINGS ☐

C.4.7. UNCONTAMINATED GROUND WATER AND

C.4.8. FOUNDATION OR FOOTING DRAINS WHERE THE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS OR POLLUTANTS ☐

D.1. THE FOLLOWING STORM WATER DISCHARGES FROM CONSTRUCTION SITES ARE NOT AUTHORIZED BY THIS PERMIT:
D.1.1. STORM WATER DISCHARGE ASSOCIATED WITH AN INDUSTRIAL ACTIVITY THAT UNDERGOES TREATMENT FROM THE SITE AFTER COLLECTION DURING RAIN COMING FROM A SITE THAT UNDERGOES TREATMENT FROM THE SAME LOCATION;
D.1.2. DISCHARGES THAT ARE MIXED WITH SOURCES OF NON-STORM WATER OTHER THAN DISCHARGES WHICH ARE IDENTIFIED IN PART IV.D.2. OF THIS PERMIT AND WHICH ARE IN COMPLIANCE WITH PART IV.D.7. (NON-STORM WATER DISCHARGES) OF THIS PERMIT;
D.1.3. STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY THAT ARE SUBJECT TO AN EXISTING NPDES INDIVIDUAL DISCHARGE PERMIT OR TO AN EXISTING NPDES GENERAL DISCHARGE PERMIT THAT IS BEYOND ITS TERM OF VALIDITY WHEN THE PERMIT EXPIRES PROVIDED THE EXISTING PERMIT DID NOT ESTABLISH NUMERIC LIMITATIONS FOR SUCH DISCHARGES; AND
D.1.4. STORM WATER DISCHARGES FROM CONSTRUCTION SITES THAT THE DIRECTOR (EPD) HAS DETERMINED TO BE OR MAY REASONABLY BE EXPECTED TO BE CONTRIBUTING TO A VIOLATION OF A WATER QUALITY STANDARD.

E.1. NO DISCHARGES AUTHORIZED BY THIS PERMIT SHALL CAUSE VIOLATIONS OF GEORGIA'S IN-STREAM WATER QUALITY STANDARDS AS PROVIDED BY THE RULES AND REGULATIONS FOR WATER QUALITY CONTROL, CHAPTER 391-3-6-.03.

1. PRIMARY PERMITTEE

A. EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT AND (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD. RAINFALL OVER 0.5 INCHES PER HOUR SHALL SUSPEND INSPECTIONS UNTIL AFTER THE RAINFALL HAS STOPPED.

A.2. NON-WORKING FORMAL HOLIDAY UNTIL A NOTICE OF TERMINATION IS SUBMITTED. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THE PERMITTEE MUST COMPLY WITH PART IV D.5.B.1.

A.3. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING HOLIDAY). INSPECTIONS SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, (WHICHEVER OCCURS FIRST).

A.3.1. DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE.

A.3.2. AREAS OF THE SITE WHERE THERE ARE AREAS OF THE SITE THAT ARE EXPOSED TO PRECIPITATION (AND

A.3.3. STRUCTURAL CONTROL MEASURES, EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY, WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV D.5.B.1.

A.4. CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE EVERY MONTH DURING THE TERM OF THIS PERMIT (I.E. UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS AND THE FOLLOWING:

A.4.1. AREAS OF THE SITE THAT ARE EXPOSED TO PRECIPITATION (AND AREAS OF THE SITE THAT ARE EXPOSED TO POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY, WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

A.5. BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS NECESSARY TO APPROPRIATELY ADDRESS ANY CHANGES IDENTIFIED. CHANGES TO THE PLAN SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. THE PRIMARY PERMITTEE MUST AMEND THE PLAN IN ACCORDANCE WITH PART IV D.5.B.(5).

A.6. A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E. INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH THE PLAN SHALL BE MAINTAINED AT THE PRIMARY PERMITTEE'S SITE AND BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORT SHALL BE READILY AVAILABLE BY THE END OF THE SECOND BUSINESS DAY FOLLOWING WORKING DAY AND SHALL IDENTIFY ANY INCIDENTS THAT MAY REQUIRE INVESTIGATION AND CORRECTIVE ACTION. INCIDENTS THAT ARE MAINTAINED AS DESCRIBED IN THE PLAN, WHERE THE REPORT DOES NOT IDENTIFY AN INCIDENT, THE INSPECTION REPORT SHALL CONTAIN A STATEMENT THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

STORMWATER SAMPLING SHALL BE IN ACCORDANCE WITH THE METHODOLOGY IN THE NPDES STORMWATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-98-001, AND THE NPDES GENERAL CONSTRUCTION NO. GAR100001 PREPARED BY THE STATE OF GEORGIA DEPARTMENT OF NATURAL RESOURCES ENVIRONMENTAL PROTECTION DIVISION.

A.1. THE PRIMARY PERMITTEE MUST SAMPLE THE ACCUMULATION WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESIGNATED BY THE PERMIT. THE FIRST RAIN EVENT SHALL BE SAMPLED WITHIN 45 MINUTES OF THE BEGINNING OF THE RAINFALL EVENT.

A.1.1. THE ACCUMULATION OF THE MINIMUM AMOUNT OF RAINFALL FOR THE FOLLOWING EVENT: THE FIRST RAIN WATER DISCHARGE TO A MONITORED RECEIVING WATER OR FROM A MONITORED OUTFALL HAS BEGUN AT OR PRIOR TO THE ACCUMULATION, OR

A.1.2. THE TERMINATION OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER OR FROM A MONITORED OUTFALL, IF THE DISCHARGE BEGINS AFTER THE ACCUMULATION OF THE MINIMUM AMOUNT OF RAINFALL FOR THE FOLLOWING EVENT:

A.2. HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE.

A.3. SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING EVENTS:

A.3.1. THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS (MONDAY THRU FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM, EXCLUDING ALL NON-WORKING FEDERAL HOLIDAYS, WHEN CONSTRUCTION ACTIVITIES ARE BEING CONDUCTED BY THE PRIMARY PERMITTEE) THAT OCCURS AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION;

A.3.2. IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS (MONDAY THRU FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM, EXCLUDING ALL NON-WORKING FEDERAL HOLIDAYS, WHEN CONSTRUCTION ACTIVITIES ARE BEING CONDUCTED BY THE PRIMARY PERMITTEE) THAT OCCURS EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST;

A.3.3. AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPs ARE FOUND TO BE PROPERLY DESIGNED, INSTALLED AND MAINTAINED, NO FURTHER ACTION IS RE.QUIRED. IF BMPs IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE COMPLETED AS SOON AS POSSIBLE. CORRECTIVE ACTION SHALL BE COMPLETED AS SOON AS POSSIBLE. NO FURTHER ACTION IS RE.QUIRED IF BMPs IN ANY AREA OF THE SITE THAT DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSE.QUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS, UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPs ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED.

A.3.4. WHERE SAMPLING PURSUANT TO (A), (B) OR (C) ABOVE IS RE.QUIRED BUT NOT POSSIBLE (OR NOT RE.QUIRED BECAUSE THERE WAS NO DISCHARGE), THE PERMITTEE, IN ACCORDANCE WITH PART IV D.4.A (6), MUST INCLUDE A WRITTEN JUSTIFICATION FOR THE NON-SAMPLING OF THAT AREA OF THE SITE. THE WRITTEN JUSTIFICATION FOR NON-SAMPLING DOES NOT RELIEVE THE PERMITTEE OF ANY SUBSE.QUENT SAMPLING OBLIGATIONS UNDER (A), (B) OR (C) ABOVE, AND EXISTING CONSTRUCTION ACTIVITIES, I.E. THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING RE.QUIREMENT BY ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE NOT MET THE SAMPLING RE.QUIREMENT BY (B) ABOVE SHALL NOT BE RE.QUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS RE.QUIRED BY (C) ABOVE.

NOTE THAT THE PERMITTEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING AT ANY TIME OF THE DAY OR WEEK.

B.1. THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS SECTION IS APPLICABLE TO PRIMARY PERMITTEES WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (1) ACRE. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING TURBIDITY.

C.1. A USGS TOPOGRAPHIC MAP, A TOPOGRAPHIC MAP OR A DRAWING (REFERRED TO AS A TOPOGRAPHIC MAP) THAT IS A SCALE EQUAL TO OR MORE DETAILED THAN A 1:24000 MAP SHOWING THE LOCATION OF THE SITE OR THE COMMON DEVELOPMENT.

C.1.1. THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES AS SHOWN ON A USGS TOPOGRAPHIC MAP, AND ALL OTHER PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION, INTO WHICH THE STORM WATER IS DISCHARGED AND

C.1.2. THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS, WHEN THE PERMITTEE HAS CHOSEN TO USE A USGS TOPOGRAPHIC MAP AND THE RECEIVING WATER(S) IS NOT SHOWN ON THE USGS TOPOGRAPHIC MAP, THE LOCATION OF THE RECEIVING WATER(S) MUST BE HAND-DRAWN ON THE USGS TOPOGRAPHIC MAP FROM WHERE THE STORM WATER(S) ENTERS THE RECEIVING WATER(S) TO THE POINT WHERE THE RECEIVING WATER(S) COMBINES WITH THE FIRST BLUE LINE STREAM SHOWN ON THE USGS TOPOGRAPHIC MAP.

C.3. WHEN THE PERMITTEE HAS DETERMINED THAT SOME OR ALL OUTFALLS WILL BE MONITORED, A RATIONALE MUST BE INCLUDED FOR THE NTU LIMIT(S) SELECTED FROM APPENDIX B. THIS RATIONALE MUST INCLUDE THE SIZE OF THE CONSTRUCTION SITE, THE CALCULATION OF THE SIZE OF THE SURFACE WATER DRAINAGE AREA, AND THE TYPE OF RECEIVING WATER(S) (I.E., TROUT STREAM OR SUPPORTING WARM WATER FISHERIES); AND

C.4. ANY ADDITIONAL INFORMATION EPD DETERMINES NECESSARY TO BE PART OF THE PLAN. EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR SUBMITTAL.

D.1. ALL SAMPLING SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES MAY BE USED WITH THE GUIDANCE OF THE NPDES PERMITTING AGENCY). FOR FURTHER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001* AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.

D.1.1. SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.

D.1.2. SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.

D.1.3. JARS WITH GLASS OR RINSED GLASS OR JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.

D.1.4. MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES RECEIVED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLING MAY BE COLLECTED FOR A PERIOD OF UP TO 72 HOURS AFTER COLLECTION. IF THIS OCCURRENCE, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED, DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED USING A DIRECT READING, PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.

D.1.5. SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E.

E.1. FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), OR ALL OUTFALL(S), OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S). SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE


- E.1.1 THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E. THE DISCHARGE FARTHEST UPSTREAM BUT DOWNSTREAM OF ANY OTHER STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY, WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.
- E.1.2 THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E. THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORM WATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY, WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.
- E.1.3 IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER OUTFALL CHANNEL(S).
- E.1.d CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL.
- E.1.f THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.
- E.1.f THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.

E.1.c. PERMITTEES DO NOT HAVE TO SAMPLE SHEETFLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT TO BE USED FOR TRAFFIC, THE EXISTING SURFACE IS COVERED BY A STABLE, PERMANENTLY STABILIZED LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL. 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR E. SOIL-LEVEL PERMANENT STABILIZATION MEASURES (SUCH AS THE USE OF RIPRAP, GABIONS, PERMANENT MULCHES OR GEOTEXTILES) HAVE BEEN USED. PERMANENT SHALL MEAN THAT THE COVERING OF THE SOIL SURFACE IS PERMANENT. A CROP OF PERENNIAL VEGETATION APPROPRIATE FOR THE TIME OF YEAR AND REGION, OR A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION, FINAL STABILIZATION APPLIES TO EACH

E.1.d. ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY, INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY AS TO ACCURATELY REFLECT WHETHER STORM WATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS III.D.3. OR III.D.4, WHICHEVER IS APPLICABLE.

S_____for _____o_____o_____

MONITORING SITE EVALUATIONS AND RECOMMENDATIONS							
SITE NAME	SITE TYPE ¹	LAT	LONG	TOTAL BASIN AREA (acres)	MONITORING SITE RECOMMENDATION	NTU LIMIT FROM PERMIT ²	RECEIVING WATERS TYPE
PC-01	IN	33.820362	-84.407705	55140	YES	N/A	WARM
PC-02	RW	33.820326	-84.412394	55296	YES	<PC-01 NTU+25	WARM

LEGEND		 33	Per NPDES Permit Appendix B, NTU Limits for Outfalls Waters Supporting Warm Water Fisheries				
IN RW	Inflow to Site Receiving Water						
<p>*Per the Erosion and Sedimentation Act of 1975 (OCGA 12-7), the allowable increase in turbidity (NTUs) between the downstream and upstream sampling points in the receiving waters is the following:</p> <table border="0"> <tr> <td>Warm Waters</td> <td>25 NTU</td> </tr> <tr> <td>Trout Waters</td> <td>10 NTU</td> </tr> </table>			Warm Waters	25 NTU	Trout Waters	10 NTU	<p>< 5 Sq.Mi. Surface Water Drainage Area Site Area < 10 acres = 75 NTUs Site Area > 10 acres = 50 NTUs</p> <p>Trout Streams <p>< 5 Sq.Mi. Surface Water Drainage Area Site Area < 50 acres = 25 NTUs Site Area > 50 acres = 20 NTUs</p> </p>
Warm Waters	25 NTU						
Trout Waters	10 NTU						

A. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD.

B. SAMPLES MUST BE SUBMITTED TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT.

C. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS.

D. SAMPLING ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD.

E. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2.

F. SAMPLING REPORTS MUST BE SUBMITTED TO THE EPD BY THE DATE(S) STATED IN THIS PERMIT. IF NOT SUBMITTED IN ACCORDANCE WITH PART VI.G. ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

G.1. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;

G.2. THE NAME(S) AND CONTACT INFORMATION OF THE PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;

G.3. THE DATE(S) ANALYSES WERE PERFORMED;

G.4. THE TIME(S) ANALYSES WERE INITIATED;

G.5. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES;

G.6. THE METHODS AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;

G.7. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC. USED TO DETERMINE THESE RESULTS;

G.8. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU" AND

H. A CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

H.1. ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL SUBMIT A COPY OF THE SUBMITTAL AT THE CONSTRUCTION SITE OR AT THE CONSTRUCTION SITE OF THE PROJECT. THE SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL IS USED BY THE PERMITTEE, THE PERMITTEE SHALL ALSO SUBMIT A PHYSICAL COPY. IF REQUIRED, A PAPER COPY MUST ALSO BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL OR SIMILAR SERVICE.

A. THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART IV.D.4.A (1) OF THIS PERMIT.

A.1. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD.

A.2. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT.

A.3. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.4 OF THIS PERMIT.

A.4. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT.

A.5. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT.

A.6. A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART II.D.2 OF THIS PERMIT.



B. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A (2) OF THIS PERMIT.

A.7. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUIRED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND CORRECTIVE ACTION REPORTS, VIOLATION SUMMARY REPORTS, AND VIOLATION SUMMARY PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS ONCE THE CONSTRUCTION PROJECT HAS BEEN COMPLETED. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

SOIL SERIES ARE GROUPINGS OF SIMILAR SOILS THAT, WITH THE ALLOWABLE EXCEPTIONS FOR TEXTURE OF SURFACE LAYER OR THE UNDERLYING SUBSTRATUM, HAVE MAJOR HORIZONS THAT ARE SIMILAR IN COMPOSITION, THICKNESS, AND ARRANGEMENT IN THE PROFILE. THE SOIL PROFILE MAPPED IN THE SURVEY ONLY DESCRIBED THE HORIZON UP TO A DEPTH OF 80-INCHES.

MAP UNIT SYMBOL	MAP UNIT NAME	SLOPE (%)
CpA	CONGAREE SANDY LOAM, OCCASIONALLY FLOODED	0-2
Ub	URBAN LAND	N/A
UC2C	URBAN LAND-CECIL COMPLEX, MODERATELY ERODED	2-10
UE	URBAN LAND-RION COMPLEX	10-25
W	WATER	N/A
WcB	Wickham sandy loam	2-6



 676886 WW-CE-02_676886.dwg CE-02		DRAWING IS TO BE CONSIDERED PRELIMINARY UNLESS APPROVED		CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES					
 Know what's below. Call before you dig.		REVISIONS		WOODWARD WAY SEWER IMPROVEMENTS EROSION CONTROL NOTES					
		NO.	DATE	DESCRIPTION					
ENGINEER OF RECORD					SURVEYOR DRAWN BY D CORBETT	FIELD BOOKS DESIGNED BY T SMITH	L.L. DIST. CHECKED BY C HAMBLÉN	COUNTY FULTON APPROVED BY T KELLEY	SCALE NTS DATE AUG 2017
				PROJECT NUMBER:				SHEET OF 41	

EROSION, SEDIMENTATION & POLLUTION CONTROL NOTES CONTINUED

- CITY OF ATLANTA REQUIRED NOTES
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.
 - EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
 - ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH AND TEMPORARY SEEDING.
 - ANY DISTURBED AREAS REMAINING IDLE FOR 30 DAYS SHALL BE STABILIZED WITH PERMANENT VEGETATION.
 - EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY, AFTER EACH RAIN, AND REPAIRED AS NECESSARY.
 - ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DETERMINED NECESSARY BY ON-SITE INSPECTION.
 - SILT FENCE SHALL MEET THE REQUIREMENTS OF SECTION 171 TYPE C TEMPORARY SILT FENCE, OF THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 1993 EDITION, AND BE WIRE REINFORCED.
 - THE PROPERTY OWNER AND CONTRACTOR ARE EQUALLY RESPONSIBLE FOR ALL EROSION CONTROL ACTIVITIES.
 - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN QUALIFIED PROFESSIONAL ADVICE WHEN QUESTIONS ARISE CONCERNING DESIGN AND EFFECTIVENESS OF EROSION CONTROL DEVICES, NOT THE CITY OF ATLANTA.
 - ALL TEMPORARY AND PERMANENT SEEDING MUST BE PERFORMED AT THE APPROPRIATE SEASON. IN SUCH INSTANCES WHERE THE ESTABLISHMENT OF VEGETATION IS INOPPORTUNE DUE TO SEASON OR DROUGHT, DISTURBED AREAS SHALL BE TEMPORARILY STABILIZED USING 2"-4" OF MULCH (DS1). ADDITIONAL PLANTINGS WILL BE NECESSARY IF A SUFFICIENT STAND OF GRASS FAILS TO GROW.
 - THE CITY'S DESIGNEE WILL VERIFY ADEQUATE COVER (100% COVER, 70% DENSITY) OF PERMANENT STABILIZATION (DS3, DS4).
 - SILT FENCES SHALL NOT BE PLACED IN STREAM BUFFER OR FLOODPLAINS, UNLESS UTILIZED FOR THE CONSTRUCTION OF AN EXEMPT ACTIVITY (I.E. ROADWAY DRAINAGE STRUCTURES, SEWER/WATER CROSSINGS, OR DRAINAGE STRUCTURES) PER THE APPROVED PLANS. FOR SUCH DISTURBANCES WITHIN THE BUFFER, THE AREA SHALL BE IMMEDIATELY STABILIZED USING EROSION CONTROL MATTING AND/OR BLANKETS ONCE THE ACTIVITY IS COMPLETE.
 - SUBCONTRACTORS INVOLVED WITH LAND DISTURBANCE ACTIVITIES SHALL MEET THE EDUCATION REQUIREMENTS (LEVEL 1) DESCRIBED IN O.C.G.A 12-7-19.

PHASE I – INITIAL PHASE: SITE PREPARATION AND PRE-CONSTRUCTION OPERATIONS

- PRIOR TO LAND DISTURBING ACTIVITY, THE CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH THE AREA SITE DEVELOPMENT INSPECTOR.
- THE CONTRACTOR SHALL OBSERVE THE PROJECT SEQUENCE SHOWN ON THE PLANS, THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL COVER IS EXPOSED ONLY IN SMALL QUANTITIES.
- THE OWNER AGREES TO PROVIDE AND MAINTAIN OFF-STREET PARKING ON THE SUBJECT PROPERTY DURING THE ENTIRE CONSTRUCTION PERIOD.
- NO STAGING AREAS, MATERIAL STORAGE, CONCRETE WASH OUT AREAS, OR DEBRIS BURNING AND BURIAL HOLES SHALL BE LOCATED WITHIN 500 FEET OF DESIGNATED TREE PROTECTION AREAS.
- A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE AT ALL TIMES.
- PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, LIMITS OF LAND DISTURBANCE SHALL CLEARLY AND ACCURATELY BE DEMARKED WITH STAKES, RIBBONS OR OTHER APPROPRIATE MEANS, AND SHALL BE DEMARKED FOR THE DURATION OF THE CONSTRUCTION ACTIVITY. NO LAND DISTURBANCE SHALL OCCUR OUTSIDE THE LIMITS INDICATED ON THE APPROVED PLANS.
- PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY TO OR EXIT FROM THE SITE OR ONTO ANY PUBLIC ROADWAY.
- THE FOLLOWING INITIAL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY.
 - THE CONSTRUCTION EXIT SHALL BE PLACED AS SHOWN ON THE PLANS.
 - IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION EXIT, ALL PERIMETER EROSION CONTROL AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED AS SHOWN ON THE CLEARING PHASE EROSION CONTROL PLAN.
 - TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBING ACTIVITY.
- WITHIN SEVEN (7) DAYS AFTER INSTALLATION OF INITIAL EROSION CONTROL MEASURES, THE SITE CONTRACTOR SHALL SCHEDULE AN INSPECTION BY THE PROJECT DESIGN PROFESSIONAL. NO OTHER CONSTRUCTION ACTIVITIES SHALL OCCUR UNTIL THE PROJECT PROFESSIONAL APPROVES THE INSTALLATION OF SAID EROSION CONTROL MEASURES. IF UNFORSEEN CONDITIONS EXIST IN THE FIELD THAT WARRANT ADDITIONAL EROSION CONTROL MEASURES, THE CONTRACTOR MUST CONSTRUCT ANY ADDITIONAL EROSION CONTROL DEVICES DEEMED NECESSARY BY THE PROJECT PROFESSIONAL DURING THE SITE INSPECTION.
- AFTER APPROVAL OF INITIAL EROSION CONTROL INSTALLATION, THE CONTRACTOR MAY PROCEED WITH CLEARING AND GRUBBING ACTIVITIES. AS CLEARING PERMITS, THE CONTRACTOR SHALL CONSTRUCT SEDIMENT PONDS AS SHOWN ON PLANS.
- THE CONTRACTOR CAN UTILIZE CLEARED TREES AS BARRIER BRUSH SEDIMENT CONTROL WHERE INITIAL GRADING ACTIVITIES WILL NOT OCCUR.
- NO BURN OR OPEN PITTS SHALL BE PERMITTED ON THE CONSTRUCTION SITE WITHOUT WRITTEN PERMISSION BY THE OWNER AND/OR THE ENGINEER OF RECORD.
- ALL SILT FENCES MUST MEET THE REQUIREMENTS OF SECTION 171-TEMPORARY SILT FENCE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF GEORGIA, STANDARD SPECIFICATIONS, 1983 EDITION.
- MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED MORE THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY VEGETATION.
- SEDIMENT AND EROSION CONTROL MEASURES MUST BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
- THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1"-3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM A VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
- CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE PROPER FUNCTIONING.
- FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE SITE UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED PLANS.

PHASE II - INTERMEDIATE PHASE: CONSTRUCTION ACTIVITIES

- DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN CAREFUL SCHEDULING AND PERFORMANCE TO ENSURE THAT LAND STRIPPED OF ITS NATURAL GROUND COVER IS EXPOSED ONLY IN SMALL QUANTITIES, AND THEREFORE LIMITED DURATIONS, BEFORE PERMANENT EROSION PROTECTION IS ESTABLISHED.
- EARTHWORK OPERATIONS IN THE VICINITY OF STREAM BUFFERS SHALL BE CAREFULLY CONTROLLED TO AVOID DUMPING OR SLOUGHING INTO THE BUFFER AREAS.
- EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION, AND ALTER THE LOCATION OF EROSION CONTROL DEVICES ACCORDINGLY. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE DESIGN PROFESSIONAL IMMEDIATELY.
- THE CONTRACTOR SHALL ESTABLISH BARRIERS AT THE TOP OF ALL SLOPES UNDER CONSTRUCTION. CUT AND FILL SLOPES SHALL NOT EXCEED 2:1.
- STORM DRAIN OUTLET PROTECTION SHALL BE PLACED AT ALL OUTLET HEADWALLS AS SOON AS THE HEADWALL IS CONSTRUCTED.
- ALL DRAINAGE SWALES AND GRADED AREAS SHALL BE APPLIED WITH VEGETATIVE COVER AS SOON AS FINAL GRADE IS ACHIEVED. MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.
- THE CONTRACTOR SHALL MAINTAIN THE SEDIMENT POND UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SEDIMENT SHALL BE CLEANED OUT OF THE POND WHEN IT REACHES ONE THIRD OF THE DEPT OF THE BASIN.
- MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 7 DAYS OF LAND DISTURBANCE. ALL DISTURBED AREAS LEFT MULCHED FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH TEMPORARY GRASSING.
- SEDIMENT AND EROSION CONTROL MEASURES MUST BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
- CONTRACTOR SHALL INSPECT CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACK OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1"-3" OF STONE, AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM A VEHICLE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED IMMEDIATELY.
- FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.

PHASE III - FINAL PHASE: CONSTRUCTION COMPLETION AND FINAL STABILIZATION

- THE CONTRACTOR SHALL MAINTAIN THE SEDIMENT POND UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SEDIMENT SHALL BE CLEANED OUT OF THE POND WHEN IT REACHES ONE THIRD OF THE DEPT OF THE BASIN.
- ALL ROADWAY AND PARKING SHOULDERS SHOULD BE GRASSED AS SOON AS FINAL GRADE IS ACHIEVED.
- SEDIMENT AND EROSION CONTROL MEASURES SHALL BE CHECKED AFTER EACH RAIN EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE. ADDITIONAL DEVICES MUST BE INSTALLED IF NEW CHANNELS HAVE DEVELOPED.
- FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE APPROVED EROSION CONTROL PLANS.
- UPON COMPLETION OF THE PROJECT AND RECEIPT OF THE CERTIFICATE OF COMPLETION, THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND DISPOSE OF THEM UNLESS NOTED OTHERWISE ON PLANS.

POLLUTION CONTROL

- THE MOST EFFICIENT METHOD OF DUST CONTROL FOR THE SITE SHALL BE DETERMINED EXPERIMENTALLY AND MAY CONSIST OF TEMPORARY MEASURES SUCH AS MULCHES, VEGETATIVE COVER, SPRAY-ON ADHESIVES, TILLAGE, IRRIGATION, BARRIERS AND/OR THE APPLICATION OF CALCIUM CHLORIDE.
- LIKEWISE, IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL CONSTRUCTION EXIT PAD DOES NOT SUFFICIENTLY REMOVE THE MUD FROM VEHICLE TIRES, THE TIRES SHOULD BE WASHED PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND PROVISIONS THAT INTERCEPT THE SEDIMENT-LADEN RUNOFF AND DIRECT IT INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- WASHOUT OF THE DRUM OF A CONCRETE TRUCK AT THE CONSTRUCTION SITE IS PROHIBITED.
- CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES WILL ONLY BE ALLOWED IN A DESIGNATED AREA PROVIDED FOR THIS PURPOSE, AS SHOWN ON THE DRAWINGS.
 - THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE FOLLOWED:
 - CONTAIN ALL WASH WATER ON SOIL IN A BOWL SHAPED AREA CREATED IN THE DESIGNATED WASH AREA TO PREVENT THE WASH WATER FROM FLOWING FROM THE WASHOUT AREA.
 - USE THE MINIMUM AMOUNT OF WATER TO WASH DOWN THE TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES.
 - REMOVE ANY CONCRETE SEDIMENT FROM THE AREA SURROUNDING THE WASHOUT AREA BEFORE IT HARDENS AND REMOVE ALL CONCRETE RESIDUE FROM THE DESIGNATED AREA ONCE IT HAS HARDENED.

STORMWATER DISCHARGE POLLUTANT REDUCTION

- ALL POLLUTANTS FROM WASTE DISPOSAL PRACTICES, SOIL ADDITIVES, REMEDIATION OF SPILLS AND LEAKS OF PETROLEUM PRODUCTS, CONCRETE TRUCK WASHOUT, ETC., SHOULD ANY OF THESE OCCUR, WILL BE CONTROLLED BY THE IMPLEMENTATION OF APPROPRIATE BEST MANAGEMENT PRACTICES.
- THE SITE WILL BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.
- PRODUCT SPECIFIC PRACTICES:
 - PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ONSITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORMWATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.
 - PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCTS WILL NOT BE DISCHARGED TO THE STORMWATER COLLECTION SYSTEM. EXCESS PRODUCT MATERIALS USED IN CONSTRUCTION SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
 - CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.
 - CERTAIN BUILDING MATERIALS - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.
 - BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

STORMWATER MANAGEMENT

THE FOLLOWING IS A DESCRIPTION OF MEASURES THAT MAY BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED.

- STORMWATER RETENTION / DETENTION STRUCTURES
- FLOW ATTENUATION BY USE OF OPEN VEGETATED SWALES AND NATURAL DEPRESSIONS
- INFILTRATION OF RUNOFF ON-SITE
- VELOCITY DISSIPATION DEVICES SHALL BE PLACED AT DISCHARGE LOCATIONS AND ALONG THE LENGTH OF ANY OUTFALL CHANNEL FOR THE PURPOSE PROVIDING A NON-EROSIVE VELOCITY FLOW FROM THE STRUCTURE TO A WATER COURSE SO THAT THE NATURAL PHYSICAL AND PHYSICAL AND BIOLOGICAL CHARACTERISTICS AND FUNCTIONS ARE MAINTAINED AND PROTECTED (E.G. NO SIGNIFICANT CHANGES IN THE HYDROLOGICAL REGIME OF THE RECEIVING WATER(S)).
- SEPTICIAL SYSTEMS (WHICH COMBINE SEVERAL PRACTICES)
- STRUCTURAL SYSTEMS SHOULD BE PLACED ON UPLAND SOILS TO THE DEGREE ATTAINABLE
- THE INSTALLATION OF THESE DEVICES MAY BE SUBJECT TO SECTION 404 OF THE CWA
- THE ESPCC ONLY ADDRESSES THE INSTALLATION OF STORMWATER MANAGEMENT MEASURES, AND NOT THE ULTIMATE OPERATION AND MAINTENANCE OF SUCH STRUCTURES AFTER THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION.
- OPERATORS ARE ONLY RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF STORMWATER MANAGEMENT MEASURES PRIOR TO FINAL STABILIZATION OF THE SITE, AND ARE NOT RESPONSIBLE FOR MAINTENANCE AFTER STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAVE BEEN ELIMINATED FROM THE SITE.

SPILL CLEANUP AND CONTROL PRACTICES

- LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE TO SITE PERSONNEL.
- MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.
- FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.
 - FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.
 - FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
 - FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.
- THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1,320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANYONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING. ANY DISTURBED AREAS REMAINING IDLE FOR 30 DAYS SHALL BE STABILIZED WITH PERMANENT VEGETATION.

- PERIMETER EROSION AND SEDIMENT CONTROL DEVICES AND ORANGE BARRIER FENCE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF SITE WORK AND REMAIN UNTIL COMPLETION OF WORK. CONTRACTOR IS RESPONSIBLE TO REPAIR OR REPLACE DAMAGED ITEMS. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AT LEAST WEEKLY, AFTER EACH RAIN, AND REPAIRED AS NECESSARY ACCUMULATED SILT SHALL BE REMOVED AS SOON AS PRACTICAL, BUT NO LATER THAN WHEN FENCE IS HALF FULL.

HAZARDOUS WASTES

- ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS.
- THE JOB SITE SUPERINTENDENT WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONNEL IN THESE PRACTICES.
- MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS, AND MSDS WILL BE MAINTAINED IN THE ESPCC FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE.
- EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS SHEETS AND THE SPECIFIC INFORMATION.
- IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.
- THE CONTRACTOR WILL IMPLEMENT THE SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN THIS ESPCC AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS.
- NO SPILLED HAZARDOUS MATERIAL OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT WITH STORMWATER STORMWATER DISCHARGE WILL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND DISCHARGES. IF SUCH CONTRACT OCCURS, THE FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORMWATER, IT SHALL BE THE RESPONSIBILITY OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC PLAN.

SANITARY WASTES

- A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED TO EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH LOCAL AND STATE REGULATIONS.
- ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMP'S MUST BE IMPLEMENTED, SUCH AS GRAVEL BAGS OR SPECIALLY DESIGNED PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTES

FROM CONTRIBUTING TO STORM WATER DISCHARGES, THE LOCATION OF WASTE UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN GRADING PHASE BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

- SANITARY SEWER WILL BE PROVIDED BY MUNICIPAL AUTHORITY AT THE COMPLETION OF THE PROJECT.

SAFETY PROTECTION

- CONSTRUCTION ACTIVITIES WILL BE PERFORMED IN COMPLIANCE WITH ALL APPLICABLE LAWS, RULES, AND REGULATIONS GOVERNING HEALTH AND SAFETY OF HUMAN BEINGS AND THE ENVIRONMENT.

BMP'S FOR PETROLEUM CHEMICAL SPILLS AND LEAKS:

PAINT AND/OR OTHER CHEMICALS SHALL BE STORED IN SECURED FACILITIES WITH RESTRICTED ACCESS TO EMPLOYEES ONLY. CLEANUP AND DISPOSAL OF THIS MATERIAL SHALL BE IN ACCORDANCE WITH ALL RECOGNIZED LOCAL AND FEDERAL REQUIREMENTS. ALL DISPOSAL SHALL BE TO APPROVED OFF-SITE WASTE FACILITIES CLASSIFIED TO ACCEPT THAT MATERIAL.

ALL PETROLEUM PRODUCTS SHALL BE STORED AND USED IN AN AREA WITH THE LEAST FORESEEABLE IMPACT IF A CATASTROPHIC EVENT SHOULD OCCUR. EMERGENCY CONTACT NUMBERS AND PROCEDURES FOR SPILLS SHALL BE AVAILABLE ON-SITE.

DRIP PANS WILL BE AVAILABLE FOR VEHICLES AND EQUIPMENT TO PREVENT OIL AND OTHER PETROLEUM PRODUCTS FROM SPILLING ONTO SOIL OR WATER.

SECONDARY CONTAINMENT IS REQUIRED FOR PETROLEUM AND OIL STORAGE TANKS.

INVENTORY OF PRODUCTS AND CORRESPONDING MATERIAL SAFETY DATA SHEETS (MSDS) WILL BE KEPT ON THE JOB SITE AT ALL TIMES.

NO PRODUCT WASTE OR EXCESS OF ANY KIND WILL BE DUMPED OR DISPOSED TO THE GROUND, INCLUDING BUT NOT LIMITED TO, PAINT, PAINT PRIMER, PAINT STRIPPER, SOLVENTS, ACIDS, BASES, OILS, GREASES, ADHESIVES, GLUES, PASTES, SEALANTS, SOLDER, CAULKING, GROUT, PUTTY, WAXES, SHEET ROCK, INSULATION, ACETATE, COOLANT, CORROSION INHIBITOR, CLEANING COMPOUNDS, HERBICIDES, TERMITICIDES, FUNGICIDE, WEED KILLERS, PESTICIDE, ETC.

DRAWING IS TO BE CONSIDERED PRELIMINARY UNLESS APPROVED												
<div>ch2m Hill ROH&D FOX</div> <div>676886</div> <div>WW-CE-03_676886.dwg</div> <div>CE-03</div> <div>811</div> <div>Know what's below. Call before you dig.</div>		REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES							
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					PROJECT NUMBER:						SHEET 22	OF 41



Georgia Soil and Water
Conservation Commission

Christopher Hamblen

Level II Certified Design Professional

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DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

DEFINITION

APPLYING PLANT RESIDUES OR OTHER SUITABLE MATERIALS, PRODUCED ON THE SITE IF POSSIBLE, TO THE SOIL SURFACE.

CONDITIONS

MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGULAR EROSION CONTROL DEVICE FOR UP TO SIX MONTHS, BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, DEPENDING ON THE MATERIAL USED, ANCHORED, AND HAVE A CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. MAINTENANCE SHALL BE REQUIRED TO MAINTAIN APPROPRIATE DEPTH AND 90% COVER. TEMPORARY VEGETATION MAY BE EMPLOYED INSTEAD OF MULCH IF THE AREA WILL REMAIN UNDISTURBED FOR LESS THAN SIX MONTHS. IF AN AREA WILL REMAIN UNDISTURBED FOR GREATER THAN SIX MONTHS, PERMANENT VEGETATIVE TECHNIQUES SHALL BE EMPLOYED.

SPECIFICATIONS

MULCHING WITHOUT SEEDING

THIS STANDARD APPLIES TO GRADES OR CLEARED AREAS WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT CAN BE STABILIZED WITH A MULCH COVER.

SITE PREPARATION

- GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.
- INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSIONS, BERMS, TERRACES AND SEDIMENT BARRIERS.
- LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.

MULCHING MATERIALS

SELECT ONE OF THE FOLLOWING MATERIALS AND APPLY AT THE DEPTH INDICATED:

- DRY STRAW OR HAY SHALL BE APPLIED AT A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVERAGE. ONE ADVANTAGE OF THIS MATERIAL IS EASY APPLICATION.
- WOOD WASTE (CHIPS, SAWDUST OR BARK) SHALL BE APPLIED AT A DEPTH OF 2 TO 3 INCHES. ORGANIC MATERIAL FROM THE CLEARING STAGE OF DEVELOPMENT SHOULD REMAIN ON SITE, BE CHIPPED, AND APPLIED AS MULCH. THIS METHOD OF MULCHING CAN GREATLY REDUCE EROSION CONTROL COSTS.
- CUTBACK ASPHALT (SLOW CURING) SHALL BE APPLIED AT 1200 GALLONS PER ACRE (OR 1/4 GALLON PER SQ. YD.).
- POLYETHYLENE FILM SHALL BE SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL FOR TEMPORARY PROTECTION. THIS MATERIAL CAN BE SALVAGED AND REUSED.

APPLYING MULCH

WHEN MULCH IS USED WITHOUT SEEDING, MULCH SHALL BE APPLIED TO PROVIDE FULL COVERAGE OF THE EXPOSED AREA.

- DRY STRAW OR HAY MULCH AND WOOD CHIPS SHALL BE APPLIED UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.
- IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENNIAL VEGETATION, 20-30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT SHALL BE APPLIED TO OFFSET THE UPTAKE OF NITROGEN CAUSED BY THE DECOMPOSITION OF THE ORGANIC MULCHES.
- CUTBACK ASPHALT SHALL BE APPLIED UNIFORMLY. CARE SHOULD BE TAKEN IN AREAS OF PEDESTRIAN TRAFFIC DUE TO PROBLEMS OF "TRACKING IN" OR DAMAGE TO SHOES, CLOTHING, ETC.
- APPLY POLYETHYLENE FILM ON EXPOSED AREAS.

ANCHORING MULCH

- STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL "PACKER DISK." DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS IT INTO THE SOIL LEAVING MUCH OF IT IN AN UPRIGHT POSITION. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION. STRAW OR HAY MULCH SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED WITH EMULSIFIED ASPHALT (GRADE AE-5 OR SS-1). THE ASPHALT EMULSION SHALL BE SPRAYED ONTO THE MULCH AS IT IS EJECTED FROM THE MACHINE. USE 100 GALLONS OF EMULSIFIED ASPHALT AND 100 GALLONS OF WATER PER TON OF MULCH. TACKIFIERS AND BINDERS CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. PLEASE REFER TO SPECIFICATION TB-TACKIFIERS AND BINDERS. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.
- POLYETHYLENE FILM SHALL BE ANCHOR TRENCHED AT THE TOP AS WELL AS INCREMENTALLY AS NECESSARY.

D2

DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

DEFINITION

THE ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS FOR SEASONAL PROTECTION ON DISTURBED OR DENUDEO AREAS.

CONDITIONS

TEMPORARY GRASSING, INSTEAD OF MULCH, CAN BE APPLIED TO ROUGH GRADED AREAS THAT WILL BE EXPOSED FOR LESS THAN SIX MONTHS. TEMPORARY VEGETATIVE MEASURES SHOULD BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL AND EFFECTIVE STABILIZATION. MOST TYPES OF TEMPORARY VEGETATION ARE IDEAL TO USE AS COMPANION CROPS UNTIL THE PERMANENT VEGETATION IS ESTABLISHED.

SPECIFICATIONS

GRADING AND SHAPING

EXCESSIVE WATER RUN-OFF SHALL BE REDUCED BY PROPERLY DESIGNED AND INSTALLED EROSION CONTROL PRACTICES SUCH AS CLOSED DRAINS, DITCHES, DIKES, DIVERSIONS, SEDIMENT BARRIERS AND OTHERS.

NO SHAPING OR GRADING IS REQUIRED IF SLOPES CAN BE STABILIZED BY HAND-SEEDED VEGETATION OR IF HYDRAULIC SEEDING EQUIPMENT IS TO BE USED.

SEEDBED PREPARATION

WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED. WHEN USING CONVENTIONAL OR HANDSEEDING, SEEDBED PREPARATION IS NOT REQUIRED IF THE SOIL MATERIAL IS LOOSE AND NOT SEALED BY RAINFALL.

WHEN SOIL HAS BEEN SEALED BY RAINFALL OR CONSISTS OF SMOOTH CUT SLOPES, THE SOIL SHALL BE PITTED, TRENCHED OR OTHERWISE SCARIFIED TO PROVIDE A PLACE FOR SEED TO LODGE AND GERMINATE.

LIME AND FERTILIZER

AGRICULTURAL LIME IS REQUIRED UNLESS SOIL TESTS INDICATE OTHERWISE. APPLY AGRICULTURAL LIME AT A RATE OF ONE TON PER ACRE. GRADED AREAS NEED LIME APPLICATION. SOILS CAN BE TESTED IF FERTILIZER IS NEEDED. UNREASONABLY FERTILE SOILS OR SOIL MATERIAL, FERTILIZER IS NOT REQUIRED. FOR SOILS WITH VERY LOW FERTILITY, 500 TO 700 POUNDS OF 10-10-10 FERTILIZER OR THE EQUIVALENT PER ACRE (12-16 LBS./1,000 SQ. FT.) SHALL BE APPLIED. FERTILIZER SHOULD BE APPLIED BEFORE LAND PREPARATION AND INCORPORATED WITH A DISK, RIPPER OR CHISEL.

SEEDING

SELECT A GRASS OR GRASS-LEGUME MIXTURE SUITABLE TO THE AREA AND SEASON OF THE YEAR. SEED SHALL BE APPLIED UNIFORMLY BY HAND, CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRAULIC SEEDER (SLURRY INCLUDING SEED AND FERTILIZER). DRILL OR CULTIPACKER SEEDERS SHOULD NORMALLY PLACE SEED ONE-QUARTER TO ONE-HALF INCH DEEP. APPROPRIATE DEPTH OF PLANTING IS TEN TIMES THE SEED DIAMETER. SOIL SHOULD BE "RAKED" LIGHTLY TO COVER SEED WITH SOIL IF SEEDED BY HAND.

MULCHING

TEMPORARY VEGETATION CAN, IN MOST CASES, BE ESTABLISHED WITHOUT THE USE OF MULCH. MULCH WITHOUT SEEDING SHOULD BE CONSIDERED FOR SHORT TERM PROTECTION. REFER TO DS1 - DISTURBED AREA STABILIZATION (WITH MULCHING ONLY).

IRRIGATION

DURING TIMES OF DROUGHT, WATER SHALL BE APPLIED AT A RATE NOT CAUSING RUNOFF AND EROSION. THE SOIL SHALL BE THOROUGHLY WETTED TO A DEPTH THAT WILL INSURE GERMINATION OF THE SEED. SUBSEQUENT APPLICATIONS SHOULD BE MADE WHEN NEEDED.

Georgia Soil & Water Conservation Commission																
Manual for Erosion and Sediment Control in Georgia (amended 2014)																
Table 6-4.1 - Plants, planting rates and planting dates for TEMPORARY COVER or COMPANION CROPS																
Major Land Resource Area (MLRA): Southern Piedmont (P), per Figure 6-4.1																
Species	Broadcast Rates		Planting Dates*													
	per acre (lbs.)	per 1000 sq.ft. (lbs.)	J	F	M	A	M	J	J	A	S	O	N	D	Remarks	
Lowegrass, weeping (Eragrostis curvula)																
alone	4	0.1			-	X	X	-								1,500,000 seed per pound. May last for several years. Mix with Sericea lespedeza.
in mixtures	2	0.05														
Millet, browntop (Panicum fasciculatum)																
alone	40	0.9			-	X	X	-								137,000 seed per pound. Quick dense cover. Will provide too much competition in mixtures if seeded at high rates.
in mixtures	10	0.2														
Millet, pearl (Pennisetum glaucum)																
alone	50	1.1			-	X	X	X	-							88,000 seed per pound. Quick dense cover. May reach 5 feet in height. Not recommended for mixtures.
Ryegrass, annual (Lolium temulentum)																
alone	40	0.9	-	-	-					-	X	X	X	X		227,000 seed per pound. Dense cover. Very competitive and is not used in mixtures.
* 'X' are optimum dates; '-' are permissible but marginal dates																

D3

DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING)

DEFINITION

THE PLANTING OF PERENNIAL VEGETATION SUCH AS TREES, SHRUBS, VINES, GRASSES, OR LEGUMES ON EXPOSED AREAS FOR FINAL PERMANENT STABILIZATION. PERMANENT PERENNIAL VEGETATION SHALL BE USED TO ACHIEVE FINAL STABILIZATION..

CONDITIONS

PERMANENT PERENNIAL VEGETATION IS USED TO PROVIDE A PROTECTIVE COVER FOR EXPOSED AREAS INCLUDING CUTS, FILLS, DAMS, AND OTHER DENUDEO AREAS.

SPECIFICATIONS

GRADING AND SHAPING

- GRADING AND SHAPING MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED.
- VERTICAL BANKS SHALL BE SLOPED TO ENABLE PLANT ESTABLISHMENT.
- WHEN CONVENTIONAL SEEDING AND FERTILIZING ARE TO BE DONE, GRADE AND SHAPE WHERE FEASIBLE AND PRACTICAL, SO THAT EQUIPMENT CAN BE USED SAFELY AND EFFICIENTLY DURING SEEDBED PREPARATION, SEEDING, MULCHING AND MAINTENANCE OF THE VEGETATION.
- CONCENTRATIONS OF WATER THAT WILL CAUSE EXCESSIVE SOIL EROSION SHALL BE DIVERTED TO A SAFE OUTLET. DIVERSIONS AND OTHER TREATMENT PRACTICES SHALL CONFORM WITH THE APPROPRIATE STANDARDS AND SPECIFICATIONS.

SEEDBED PREPARATION

- SEEDBED PREPARATION MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED. WHEN CONVENTIONAL SEEDING IS TO BE USED, SEEDBED PREPARATION WILL BE DONE AS FOLLOWS:

BROADCAST PLANTINGS

- TILLAGE AT A MINIMUM, SHALL ADEQUATELY LOOSEN THE SOIL TO A DEPTH OF 4 TO 6 INCHES. ALLEVIATE COMPACTION. INCORPORATE LIME AND FERTILIZER. SMOOTH AND FIRM THE SOIL. ALLOW FOR THE PROPER PLACEMENT OF SEED, SPRIGS, OR PLANTS. AND ALLOW FOR THE ANCHORING OF STRAW OR HAY MULCH IF A DISK IS TO BE USED.
- TILLAGE MAY BE DONE WITH ANY SUITABLE EQUIPMENT.
- TILLAGE SHOULD BE DONE ON THE CONTOUR WHERE FEASIBLE.
- ON SLOPES TOO STEEP FOR THE SAFE OPERATION OF TILLAGE EQUIPMENT, THE SOIL SURFACE SHALL BE PITTED OR TRENCHED ACROSS THE SLOPE WITH APPROPRIATE HAND TOOLS TO PROVIDE TWO PLACES 6 TO 8 INCHES APART IN WHICH SEED MAY LODGE AND GERMINATE. HYDRAULIC SEEDING MAY ALSO BE USED.

INDIVIDUAL PLANTS

- WHERE INDIVIDUAL PLANTS ARE TO BE SET, THE SOIL SHALL BE PREPARED BY EXCAVATING HOLES, OPENING FURROWS, OR DIBBLE PLANTING.
- FOR NURSERY STOCK PLANTS, HOLES SHALL BE LARGE ENOUGH TO ACCOMMODATE ROOTS WITHOUT CROWDING.
- WHERE PINE SEEDLINGS ARE TO BE PLANTED, SUBSOIL UNDER THE ROW 36 INCHES DEEP ON THE CONTOUR FOUR TO SIX MONTHS PRIOR TO PLANTING. SUBSOILING SHOULD BE DONE WHEN THE SOIL IS DRY, PREFERABLY IN AUGUST OR SEPTEMBER.

PLANTING

- HYDRAULIC SEEDING
 - MIX THE SEED (INNOCULATED IF NEEDED), FERTILIZER, AND WOOD CELLULOSE OR WOOD PULP FIBER MULCH WITH WATER AND APPLY IN A SLURRY UNIFORMLY OVER THE AREA TO BE TREATED. APPLY WITHIN ONE HOUR AFTER THE MIXTURE IS MADE.
- CONVENTIONAL SEEDING
 - SEEDING WILL BE DONE ON A FRESHLY PREPARED AND FIRMED SEEDBED. FOR BROADCAST PLANTING, USE A CULTIPACKER SEEDER, DRILL, ROTARY SEEDER, OTHER MECHANICAL SEEDER, OR HAND SEEDING TO DISTRIBUTE THE SEED UNIFORMLY OVER THE AREA TO BE TREATED. COVER THE SEED LIGHTLY WITH 1/8 TO 1/4 INCH OF SOIL FOR SMALL SEED AND 1/2 TO 1 INCH FOR LARGE SEED WHEN USING A CULTIPACKER OR OTHER SUITABLE EQUIPMENT.
- NO-TILL SEEDING
 - NO-TILL SEEDING IS PERMISSIBLE INTO ANNUAL COVER CROPS WHEN PLANTING IS DONE FOLLOWING MATURITY OF THE COVER CROP OR IF THE TEMPORARY COVER STAND IS SPARSE ENOUGH TO ALLOW ADEQUATE GROWTH OF THE PERMANENT (PERENNIAL) SPECIES. NO-TILL SEEDING SHALL BE DONE WITH APPROPRIATE NO-TILL SEEDING EQUIPMENT. THE SEED MUST BE UNIFORMLY DISTRIBUTED AND PLANTED AT THE PROPER DEPTH.
- INDIVIDUAL PLANTS
 - SHRUBS, VINES AND SPRIGS MAY BE PLANTED WITH APPROPRIATE PLANTERS OR HAND TOOLS. PINE TREES SHALL BE PLANTED MANUALLY IN THE SUBSOIL FURROW. EACH PLANT SHALL BE SET IN A MANNER THAT WILL AVOID CROWDING THE ROOTS. NURSERY STOCK PLANTS SHALL BE PLANTED AT THE SAME DEPTH OR SLIGHTLY DEEPER THAN THEY GREW AT THE NURSERY. THE TIPS OF VINES AND SPRIGS MUST BE AT OR SLIGHTLY ABOVE THE GROUND SURFACE. WHERE INDIVIDUAL HOLES ARE DUG, FERTILIZER SHALL BE PLACED IN THE BOTTOM OF THE HOLE, TWO INCHES OF SOIL SHALL BE ADDED AND THE PLANT SHALL BE SET IN THE HOLE.

MULCHING

- MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:
- DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY SHALL BE APPLIED AT A RATE OF 2 1/2 TONS PER ACRE.
- WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED ABOVE) AFTER HYDRAULIC SEEDING.
- ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES A TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 3/4:1 OR STEEPER.
- SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF THREE TONS PER ACRE.
- PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.
- WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLOCK SOD, MULCH IS NOT REQUIRED.
- BITUMINOUS TREATED ROVING MAY BE APPLIED ON PLANTED AREAS ON SLOPES, IN DITCHES OR DRY WATERWAYS TO PREVENT EROSION. BITUMINOUS TREATED ROVING SHALL BE APPLIED WITHIN 24 HOURS AFTER AN AREA HAS BEEN PLANTED. APPLICATION RATES AND MATERIALS MUST MEET GEORGIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
- WOOD CELLULOSE AND WOOD PULP FIBERS SHALL NOT CONTAIN GERMINATION OR GROWTH INHIBITING FACTORS. THEY SHALL BE EVENLY DISPERSED WHEN AGITATED IN WATER. THE FIBERS SHALL CONTAIN A DYE TO ALLOW VISUAL METERING AND AID IN UNIFORM APPLICATION DURING SEEDING.

APPLYING MULCH

- STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY WITHIN 24 HOURS AFTER SEEDING AND/OR PLANTING. THE MULCH MAY BE SPREAD BY BLOWER-TYPE SPREADING EQUIPMENT, OTHER SPREADING EQUIPMENT OR BY HAND. MULCH SHALL BE APPLIED TO COVER 75% OF THE SOIL SURFACE.
- WOOD CELLULOSE OR WOOD FIBER MULCH SHALL BE APPLIED UNIFORMLY WITH HYDRAULIC SEEDING EQUIPMENT.

ANCHORING MULCH

- ANCHOR STRAW OR HAY MULCH IMMEDIATELY AFTER APPLICATION BY ONE OF THE FOLLOWING METHODS:
- EMULSIFIED ASPHALT CAN BE (A) SPRAYED UNIFORMLY ONTO THE MULCH AS IT IS EJECTED FROM THE BLOWER MACHINE OR (B) SPRAYED ON THE MULCH IMMEDIATELY FOLLOWING MULCH APPLICATION WHEN STRAW OR HAY IS SPREAD BY METHODS OTHER THAN SPECIAL BLOWER EQUIPMENT.
- THE COMBINATION OF ASPHALT EMULSION AND WATER SHALL CONSIST OF A HOMOGENEOUS MIXTURE SATISFACTORY FOR SPRAYING. THE MIXTURE SHALL CONSIST OF 100 GALLONS OF GRADE SS-1H OR CSS-1H EMULSIFIED ASPHALT AND 100 GALLONS OF WATER PER TON OF MULCH.
- CARE SHALL BE TAKEN AT ALL TIMES TO PROTECT STATE WATERS, THE PUBLIC, ADJACENT PROPERTY, PAVEMENTS, CURBS, SIDEWALKS, AND ALL OTHER STRUCTURES FROM ASPHALT DISCOLORATION.
- HAY AND STRAW MULCH SHALL BE PRESSED INTO THE SOIL IMMEDIATELY AFTER THE MULCH IS SPREAD. A SPECIAL "PACKER DISK" OR DISK HARROW WITH THE DISKS SET STRAIGHT MAY BE USED. THE DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISKS SHALL BE DULL ENOUGH TO PRESS THE MULCH INTO THE GROUND WITHOUT CUTTING IT, LEAVING MUCH OF IT IN AN UPRIGHT POSITION. MULCH SHALL NOT BE PLOWED INTO THE SOIL.
- SYNTHETIC TACKIFIERS OR BINDERS APPROVED BY GDOT SHALL BE APPLIED IN CONJUNCTION WITH OR IMMEDIATELY AFTER THE MULCH IS SPREAD. SYNTHETIC TACKIFIERS SHALL BE MIXED AND APPLIED ACCORDING TO MANUFACTURER'S SPECIFICATIONS. REFER TO TB-TACKIFIERS AND BINDERS.
- RYE OR WHEAT CAN BE INCLUDED WITH FALL AND WINTER PLANTINGS TO STABILIZE THE MULCH. THEY SHALL BE APPLIED AT A RATE OF ONE-QUARTER TO ONE-HALF BUSHEL PER ACRE.
- PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH MAY BE NEEDED TO ANCHOR STRAW OR HAY MULCH ON UNSTABLE SOILS AND CONCENTRATED FLOW AREAS. THESE MATERIALS SHALL BE INSTALLED AND ANCHORED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

IRRIGATION

- IRRIGATION SHALL BE APPLIED AT A RATE THAT WILL NOT CAUSE RUNOFF.

Lime Application for PERMANENT COVER - DS3
Agricultural lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise.

Georgia Soil & Water Conservation Commission																
Manual for Erosion and Sediment Control in Georgia (amended 2009)																
Table 6-2.2 - Plants, planting rates and planting dates for PERMANENT COVER																
Major Land Resource Area (MLRA): Southern Piedmont (P), per Figure 6-4.1																
Species	Broadcast Rates		Planting Dates*													
	per acre (lbs.)	per 1000 sq.ft. (lbs.)	J	F	M	A	M	J	J	A	S	O	N	D	Remarks	
Bermuda, common (Cynodon dactylon) - Hulled																
alone	10	0.2			-	X	X	-								1,787,000 seed per pound. Quick cover. Low growing and sod-forming. Full sun. Good for athletic fields.
Bermuda, common (Cynodon dactylon) - Unhulled																
alone	10	0.2	X								X	X	X			Plant with winter annuals.
with other perennials	6	0.1														Plant with Tall Fescue.
Pescue, tall (Festuca arvensis)											-	X	X			227,000 seed per pound. Use alone only on better sites. Not for droughty soils. Mix with perennial lespedezas or Crowsnest. Apply topdressing in spring following fall plantings. Not for heavy use areas or athletic fields.
alone	50	1.1														
with other perennials	30	0.7										X	X			
Lowegrass, weeping (Eragrostis curvula)																
alone	4	0.1			-	X	X	-								1,500,000 seed per pound. May last for several years. Grows well with Sericea lespedeza on road banks.
in mixtures	2	0.05														
* 'X' are optimum dates; '-' are permissible but marginal dates																

ch2m|ROH&D|FOX

676886

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811

Know what's below.
Call before you dig.

DRAWING IS TO BE CONSIDERED PRELIMINARY UNLESS APPROVED													
	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES									
	N.O.	DATE	DESCRIPTION										
				WOODWARD WAY SEWER IMPROVEMENTS EROSION CONTROL NOTES									
				SURVEYOR		FIELD BOOKS		L.L. DIST.		COUNTY FULTON		SCALE NTS	
				DRAWN BY D CORBETT		DESIGNED BY T SMITH		CHECKED BY C HAMBLÉN		APPROVED BY T KELLEY		DATE AUG 2017	
	ENGINEER OF RECORD			PROJECT NUMBER:								23	SHEET OF



DUST CONTROL ON
DISTURBED AREAS

DEFINITION

CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS, AND DEMOLITION SITES.

CONDITIONS

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO SURFACE AND AIR MOVEMENT OF DUST WHERE ON AND OFF-SITE DAMAGE MAY OCCUR WITHOUT TREATMENT.

METHOD AND MATERIALS

A. TEMPORARY METHODS

- MULCHES. SEE STANDARD DS1 - DISTURBED AREA STABILIZATION (WITH MULCHING ONLY). SYNTHETIC RESINS MAY BE USED INSTEAD OF ASPHALT TO BIND MULCH MATERIAL. REFER TO STANDARD TB-TACKIFIERS AND BINDERS. RESINS SUCH AS CURASOL OR TERRATAK SHOULD BE USED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- VEGETATIVE COVER. SEE STANDARD DS2 - DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING).
- SPRAY-ON ADHESIVES. THESE ARE USED ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS. REFER TO STANDARD TB-TACKIFIERS AND BINDERS.
- TILLAGE. THIS PRACTICE IS DESIGNED TO ROUGHEN AND BRING CLODS TO THE SURFACE. IT IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE WIND EROSION STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
- IRRIGATION. THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS WET. REPEAT AS NEEDED.
- BARRIERS. SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 15 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING WIND EROSION.
- CALCIUM CHLORIDE. APPLY AT RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

B. PERMANENT METHODS

- PERMANENT VEGETATION: SEE STANDARD DS3 - DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION). EXISTING TREES AND LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
- TOPSOILING: THIS ENTAILS COVERING THE SURFACE WITH LESS ERODIBLE SOIL MATERIAL. SEE STANDARD TP - TOPSOILING.
- STONE: COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL. SEE STANDARD CR-CONSTRUCTION ROAD STABILIZATION.

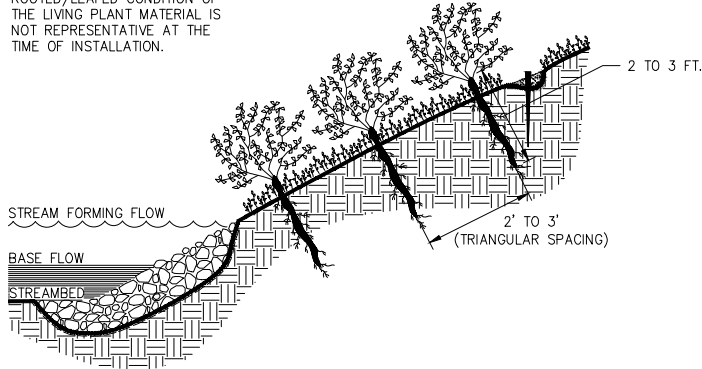
Georgia Soil & Water Conservation Commission				
Manual for Erosion and Sediment Control in Georgia (amended 2014)				
Table 6-5.1 - Fertilizer Requirements				
Species	Year	N-P-K	Rate (lbs./acre)	N Top-Dressing Rate (lbs./acre)
Cool season grasses	First	6-12-12	1500	50-100
	Second	6-12-12	1000	
	Maintenance	10-10-10	400	30
Cool season grasses & legumes	First	6-12-12	1500	0-50
	Second	0-10-10	1000	
	Maintenance	0-10-10	400	
Ground covers	First	10-10-10	1300	
	Second	10-10-10	1300	
	Maintenance	10-10-10	1100	
Pine Seedlings	First	20-10-5	*	
Shrub Landscape	First	0-10-10	700	
	Maintenance	0-10-10	700	
Temporary cover crops seeded alone	First	10-10-10	500	30
	Second	6-12-12	1500	50-100
Warm season grasses	First	6-12-12	800	50-100
	Second	6-12-12	800	
	Maintenance	10-10-10	400	30
Warm season grasses and legumes	First	6-12-12	1500	50
	Second	0-10-10	1000	
	Maintenance	0-10-10	400	

* one 21-gram pellet per seedling placed in the closing hole



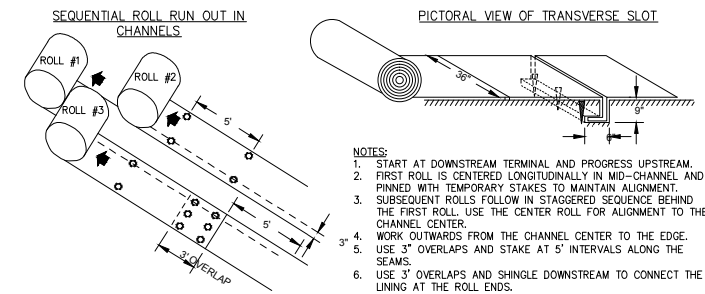
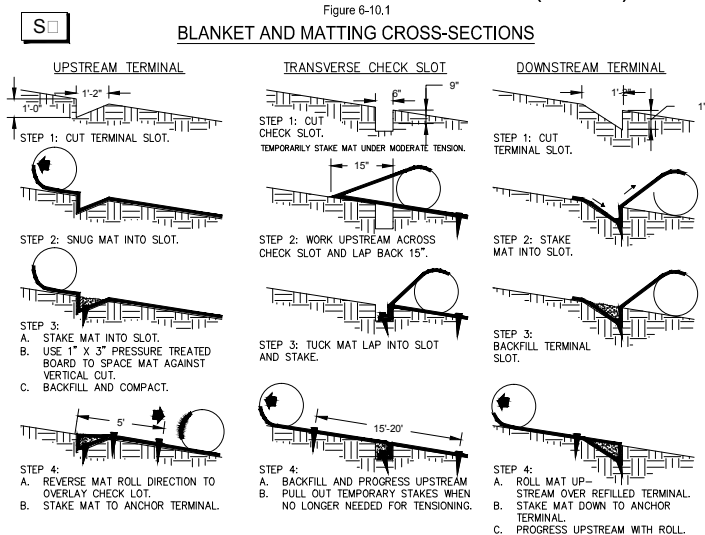
STREAM STABILIZATION
LIVE STAKING CROSS-SECTION

NOTES:
ROOTED/LEAFED CONDITION OF THE LIVING PLANT MATERIAL IS NOT REPRESENTATIVE AT THE TIME OF INSTALLATION.



- NOTES:
- ALL LIVE STAKES SHALL ARRIVE ON THE JOBSITE WITHIN 8 HOURS OF CUTTING AND BE INSTALLED A MAXIMUM OF 2 DAYS AFTER THEY ARRIVE.
 - LIVE STAKES SHALL HAVE A MINIMUM DIAMETER OF 1/2 INCH AND A MAXIMUM DIAMETER OF 1 INCH.
 - LIVE STAKES SHALL BE HAMMERED INTO THE GROUND THROUGH INSTALLED COIR FABRIC. THE LIVE STAKES SHALL PROTRUDE FROM THE FINISHED GROUND ELEVATION 1 TO 2 FEET.

TYPICAL INSTALLATION GUIDELINES FOR ROLLED
EROSION CONTROL PRODUCTS (RECP)



GEORGIA
UNIFORM CODING SYSTEM
FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES
GEORGIA SOIL AND WATER CONSERVATION COMMISSION

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHEDIAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
CS	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION ROAD STABILIZATION			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
D	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
D	DIVERSION			An earth channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
D-1	TEMPORARY DOWNSTREAM STRUCTURE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
D-2	PERMANENT DOWNSTREAM STRUCTURE			A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
G	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
LS	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
R	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
R	RETRO FITTING			A device or structure placed in front of a permanent streamwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
S	FLOATING SURFACE SKIMMER			A buoyant device that releases/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
S	SEEP BERM			Linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING			A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
S	STORMDRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
S	SURFACE ROUGHENING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
T	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
T	TOPSOILING			The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.
W	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
C	COASTAL DUNE STABILIZATION (WITH VEGETATION)			Planting vegetation on dunes that are denuded artificially constructed, or re-nourished.
D-1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
D-2	DISTURBED AREA STABILIZATION (WITH TEMP. SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
D-3	DISTURBED AREA STABILIZATION (WITH PERM. SEEDING)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
D-4	DISTURBED AREA STABILIZATION (SEEDING)			A permanent vegetative cover using sods on highly erodible or critically eroded lands.
D	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on construction site, roadways and similar sites.
F-Co	FLOCCULANTS AND COAGULANTS			Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
S	STREAMBANK STABILIZATION (ENGINE FORM. VEGETATION)			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
S	SLOPE STABILIZATION			A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
T	TACKIFIERS AND BINDERS			Substance used to anchor straw or hay mulch by causing the organic material to bind together.

GoSWCC (Amended -- 2013)



Georgia Soil and Water
Conservation Commission

Christopher Hamblen
Level II Certified Design Professional

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REVISIONS

NO. DATE DESCRIPTION

CITY OF ATLANTA
DEPARTMENT OF WATERSHED MANAGEMENT
OFFICE OF ENGINEERING SERVICES

WOODWARD WAY SEWER IMPROVEMENTS
EROSION CONTROL NOTES

SURVEYOR FIELD BOOKS L.L. DIST. COUNTY SCALE
FULTON NTS

DRAWN BY CHECKED BY APPROVED BY DATE
D CORBETT T SMITH C HAMBLEN T KELLEY AUG 2017

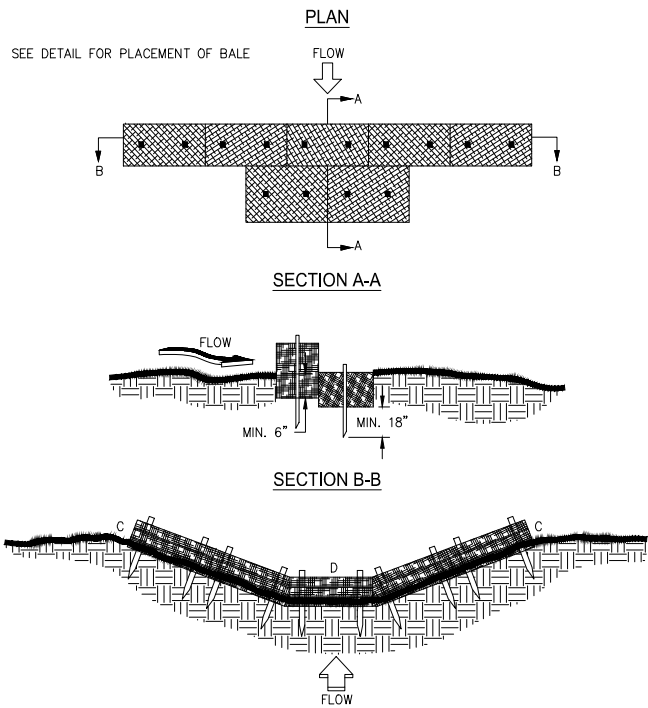
PROJECT NUMBER: SHEET 24 OF 41

ENGINEER OF RECORD

Cd

TYPICAL STRAW BALE CHECK DAM

Figure 6-12.3

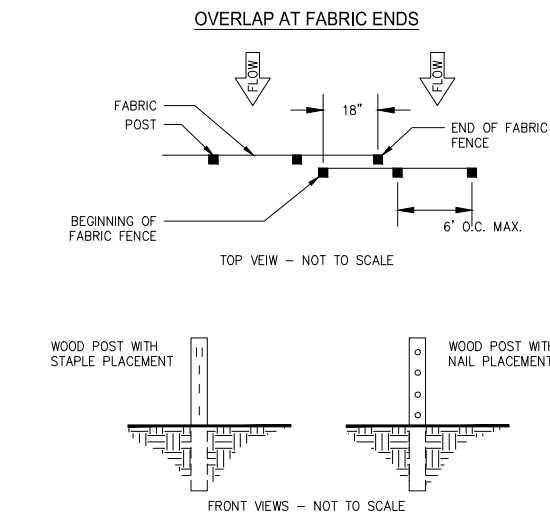


- NOTES:
- BALES SHOULD BE BOUND WITH WIRE OR NYLON STRING AND SHOULD BE PLACED IN ROWS WITH BALE ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
 - REMOVE #4 REBAR AFTER STRAW BALES ARE NO LONGER IN PLACE.
 - POINT C OF SECTION B-B SHOULD ALWAYS BE HIGHER THAN POINT D.

Sd1

FASTENERS FOR SILT FENCES

Figure 6-27.5

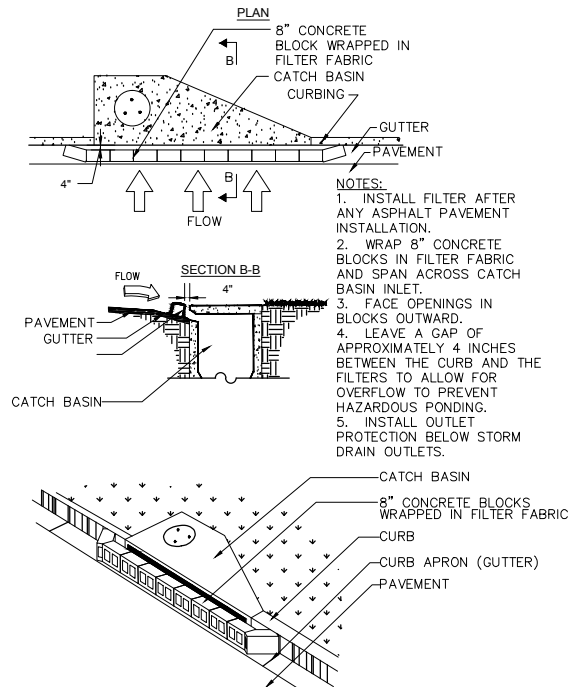


- NOTES:
- THE FABRIC AND WIRE SHOULD BE SECURELY FASTENED TO POSTS AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18" OR WRAPPED TOGETHER AROUND A POST TO PROVIDE A CONTINUOUS FABRIC BARRIER AROUND THE INLET.

Sd2-P

INLET SEDIMENT TRAP

TYPE (PIG IN BLANKET)



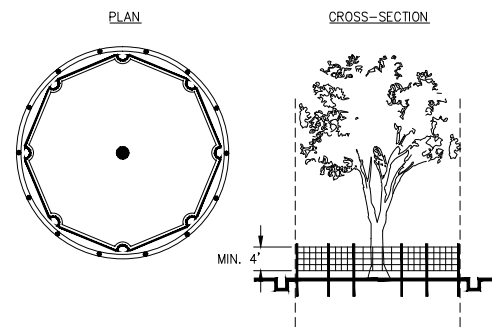
- NOTES:
- INSTALL FILTER AFTER ANY ASPHALT PAVEMENT INSTALLATION.
 - WRAP 8" CONCRETE BLOCKS IN FILTER FABRIC AND SPAN ACROSS CATCH BASIN INLET.
 - FACE OPENINGS IN BLOCKS OUTWARD.
 - LEAVE A GAP OF APPROXIMATELY 4 INCHES BETWEEN THE CURB AND THE FILTERS TO ALLOW FOR OVERFLOW TO PREVENT HAZARDOUS PONDING.
 - INSTALL OUTLET PROTECTION BELOW STORM DRAIN OUTLETS.

Tr

TREE PROTECTION

"SNOW" FENCE

Figure 6-38.1



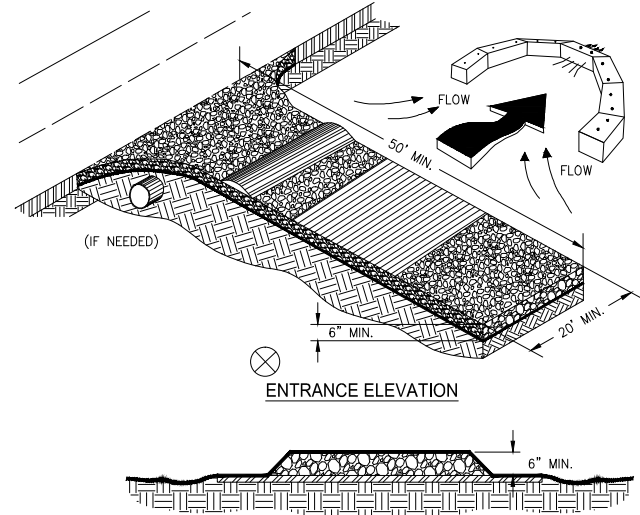
- NOTES:
- USE TRENCHER (I.E. DITCH WHICH) TO CUT A 4"-5" W X 18" D TRENCH ALONG DRIP LINE (LIMIT OF CLEARING) AND BACKFILL WITH SAND AND LIGHTLY COMPACT.
 - SPACE STAKES AT INTERVALS SUFFICIENT TO MAINTAIN ALL FENCING OUT OF DRIP LINE OR AS SHOWN BY ENGINEER (SET STAKES NO GREATER THAN 6 FEET ON CENTER-REBAR IS NOT TO BE USED FOR STAKES).
 - MAINTAIN FENCE BY REPAIRING AND/OR REPLACING DAMAGED FENCE. DO NOT REMOVE FENCING PRIOR TO LANDSCAPING OPERATIONS.
 - DO NOT STORE OR STACK MATERIALS, EQUIPMENT, OR VEHICLES WITHIN FENCED AREA.
 - FENCE SHALL BE ORANGE VINYL "SNOW FENCE" 4' HIGH MINIMUM.

Co

CRUSHED STONE CONSTRUCTION EXIT

Figure 6-14.1

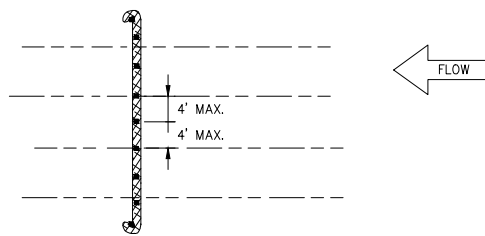
EXIT DIAGRAM



- NOTES:
- AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
 - REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
 - AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
 - GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
 - PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20".
 - A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
 - INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
 - WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
 - WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
 - MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Sd1-NS

COMPOST SOCKS FOR CHECK DAMS



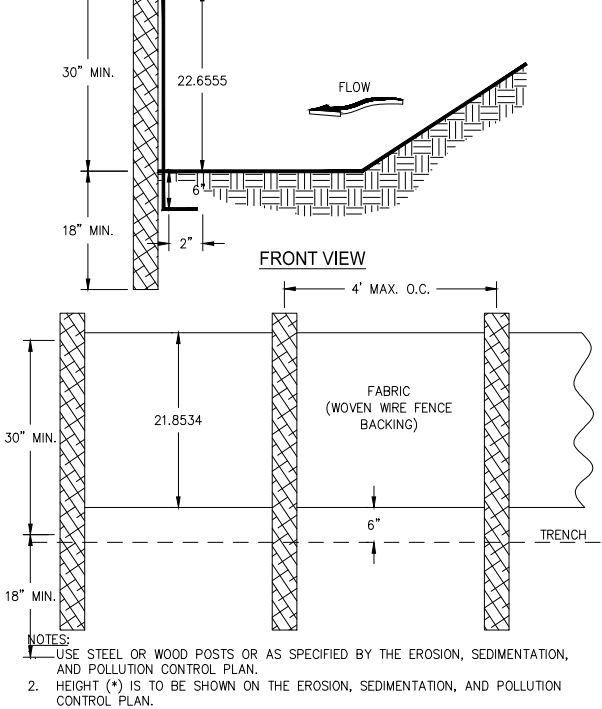
- NOTES:
- ALL MATERIAL TO MEET SPECIFICATIONS.
 - PLACE ONE STAKE AT THE CENTER OF THE DITCH/CHANNEL. ALSO PLACE STAKES AT THE BED/BANK JUNCTION AND AT END OF THE DEVICE NOT SPACED MORE THAN 4 FEET APART.
 - SEDIMENT SHOULD BE REMOVED FROM BEHIND THE CHECK DAM ONCE THE ACCUMULATED HEIGHT HAS REACHED 1/2 THE HEIGHT OF THE CHECK DAM.
 - CHECK DAMS CAN BE DIRECT SEEDED AT THE TIME OF INSTALLATION.
 - MINIMUM STAKING DEPTH FOR SAND, SILT, AND CLAY SHALL BE 18".

Sd1-S

SILT FENCE - TYPE SENSITIVE

Figure 6-27.2

SIDE VIEW



- NOTES:
- USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
 - HEIGHT (*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

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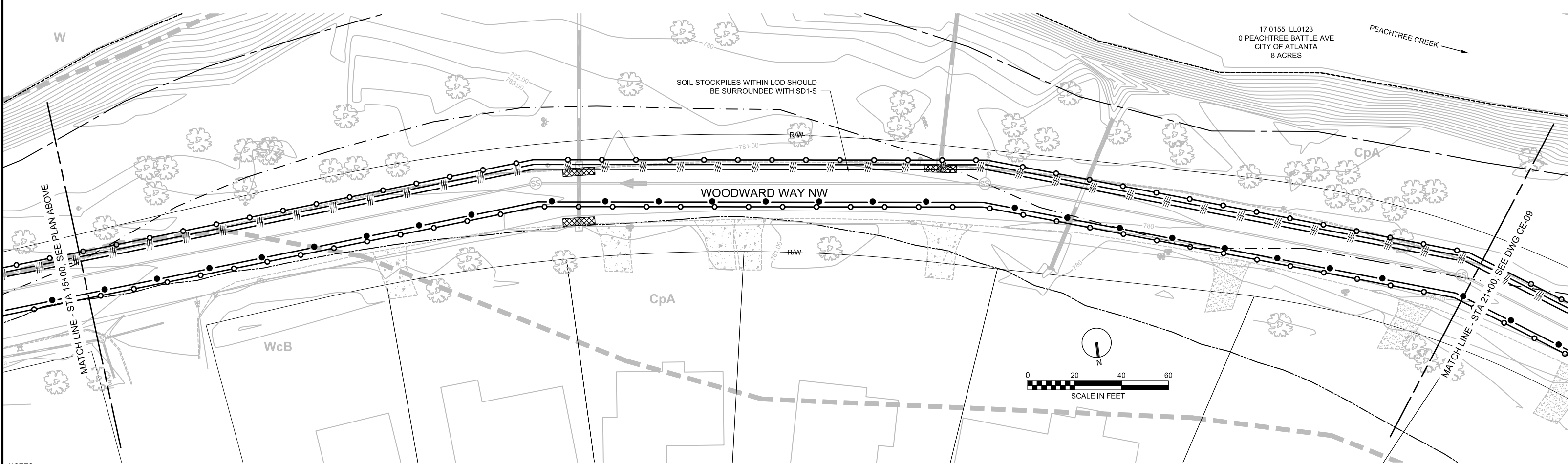
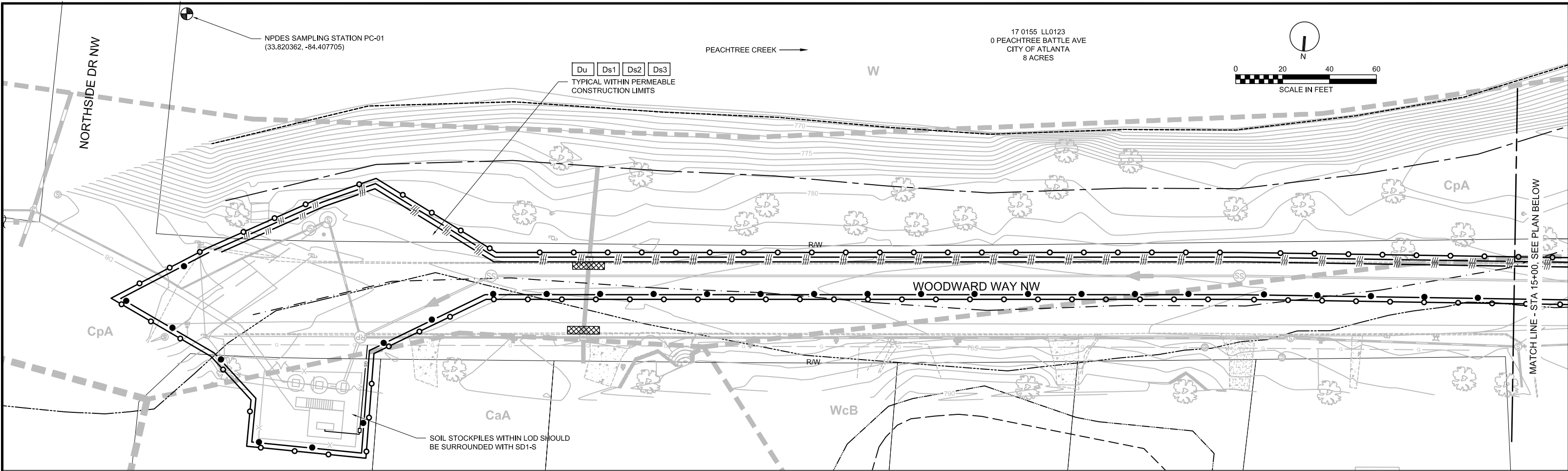
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	NO.	DATE	DESCRIPTION								
				WOODWARD WAY SEWER IMPROVEMENTS EROSION CONTROL DETAILS							
				SURVEYOR		FIELD	BOOKS	L.L.	DIST.	COUNTY FULTON	SCALE NTS
				DRAWN BY D CORBETT		DESIGNED BY T SMITH	CHECKED BY C HAMBLÉN		APPROVED BY T KELLEY	DATE AUG 2017	
ENGINEER OF RECORD				PROJECT NUMBER:					SHEET OF		25 41



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 - STRAW BALES SHALL BE USED AS NEEDED.

EROSION CONTROL LEGEND

	LIMIT OF DISTURBANCE/ ORANGE SAFETY FENCE
	SILT FENCE
	COMPOST FILTER SOCK
	INLET PROTECTION
	CONSTRUCTION EXIT
	GAEPD BUFFER IMPACT
	SOIL TYPE BOUNDARY
	SOIL TYPE

- | | |
|--|---|
| | POINT OF WRESTED VEGETATION |
| | 25' GAEPD UNDISTURBED BUFFER AS MEASURED FROM POINT OF WRESTED VEGETATION |
| | CITY OF ATLANTA 75' STREAM BUFFER |
| | FEMA REGULATORY FLOODWAY |
| | FEMA 100 YR FLOOD BOUNDARY |
| | FEMA 500 YR FLOOD BOUNDARY |
| | NPDES SAMPLING LOCATION |

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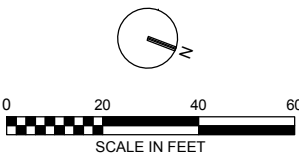
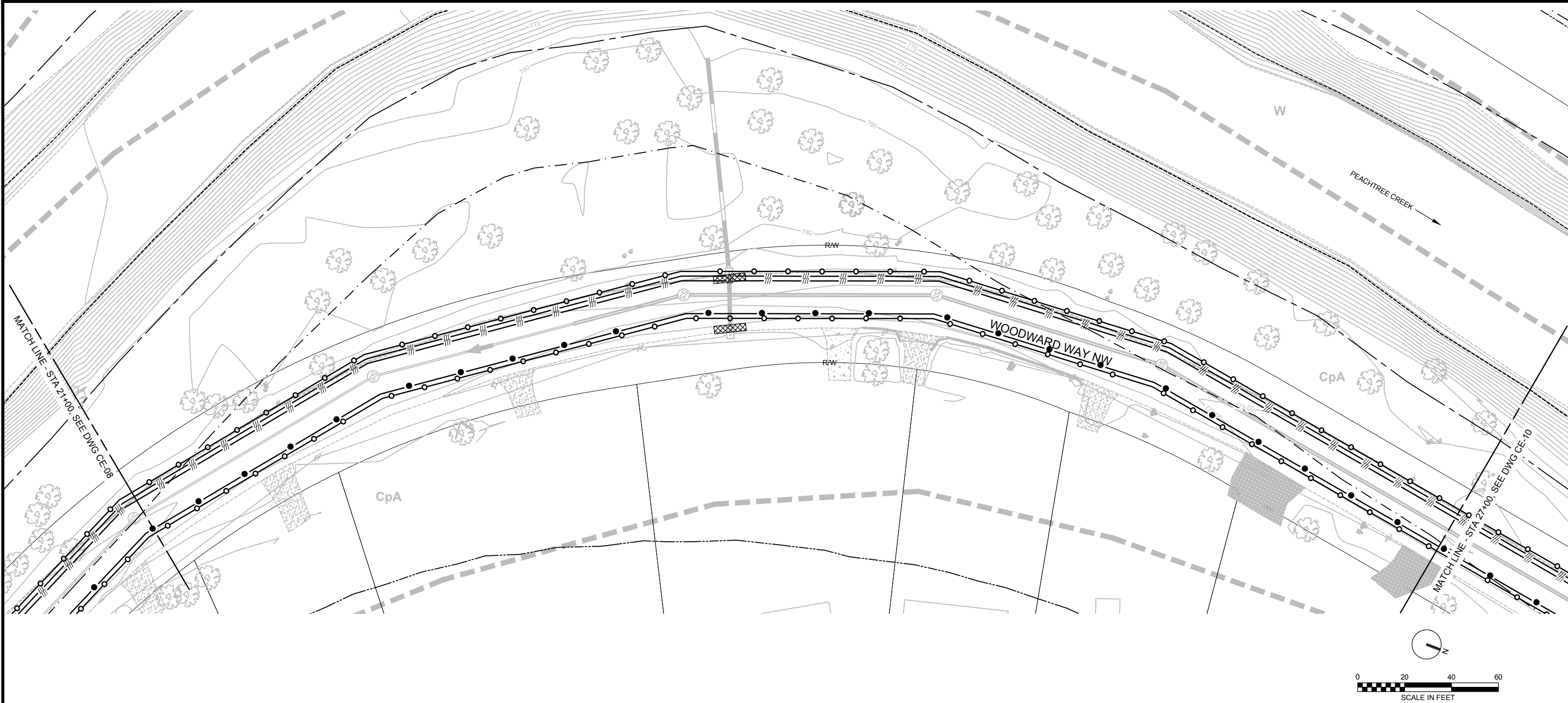
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NO.	DATE	DESCRIPTION						
ENGINEER OF RECORD			PROJECT NUMBER:					

SURVEYOR		FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE
D. CORBETT		DESIGNED BY	T. SMITH	CHECKED BY	C. HAMBLÉN	APPROVED BY	T. KELLEY
DATE		AUG 2017		DATE		AUG 2017	
SHEET		27		OF		41	



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 4. STRAW BALES SHALL BE USED AS NEEDED.

EROSION CONTROL LEGEND

	LIMIT OF DISTURBANCE/ ORANGE SAFETY FENCE	Tr
	SILT FENCE	Sd1-S
	COMPOST FILTER SOCK	Sd1-NS
	INLET PROTECTION	Sd2-P
	CONSTRUCTION EXIT	Co
	GAEPD BUFFER IMPACT	
	SOIL TYPE BOUNDARY	
	SOIL TYPE	

- | | |
|--|---|
| | POINT OF WRESTED VEGETATION |
| | 25' GAEPD UNDISTURBED BUFFER
AS MEASURED FROM POINT OF
WRESTED VEGETATION |
| | CITY OF ATLANTA 75' STREAM BUFFER |
| | FEMA REGULATORY FLOODWAY |
| | FEMA 100 YR FLOOD BOUNDARY |
| | FEMA 500 YR FLOOD BOUNDARY |
| | NPDES SAMPLING LOCATION |

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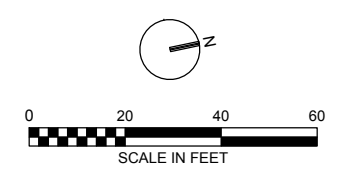
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A POWER RANK COMPANY

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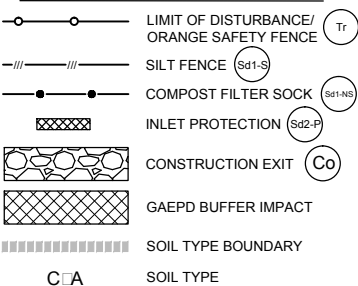
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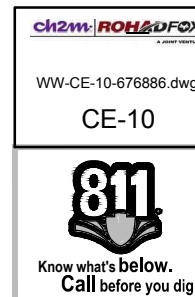
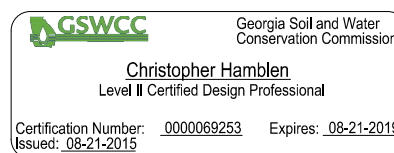
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WOODWARD WAY SEWER IMPROVEMENTS EROSION AND SEDIMENT CONTROL PLANS									
SURVEYOR		FIELD		BOOKS		L.L.		DIST.	
D CORBETT		DESIGNED BY		T SMITH		CHECKED BY		C HAMBLEN	
APPROVED BY		T KELLEY		DATE		AUG 2017		SHEET 28 OF 41	
PROJECT NUMBER:									
ENGINEER OF RECORD									



- ### EROSION CONTROL LEGEND



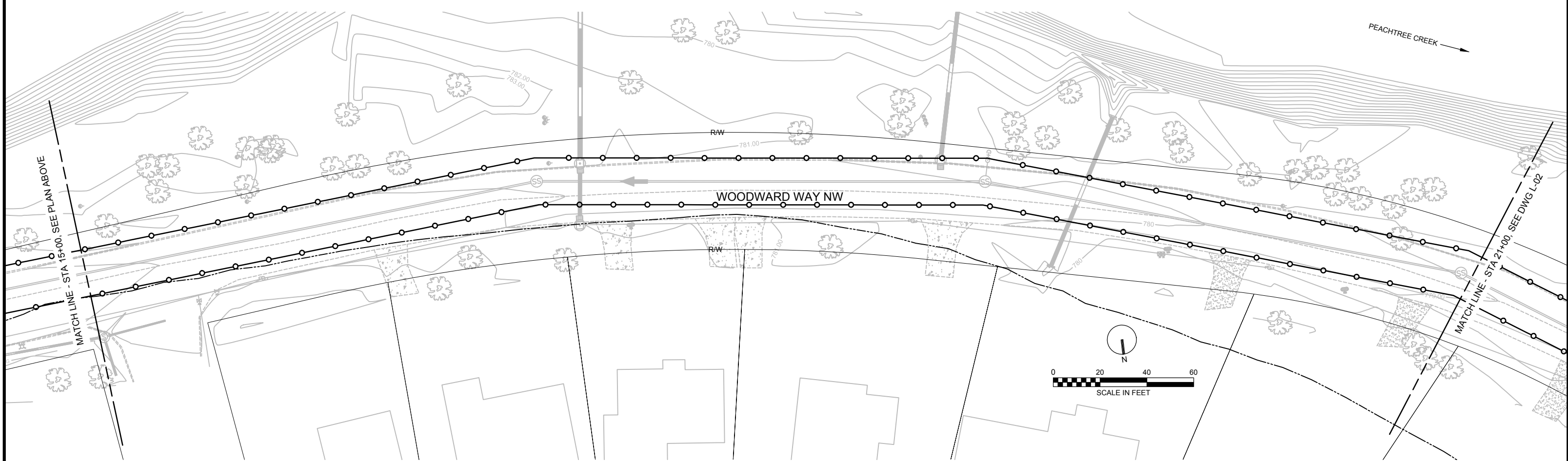
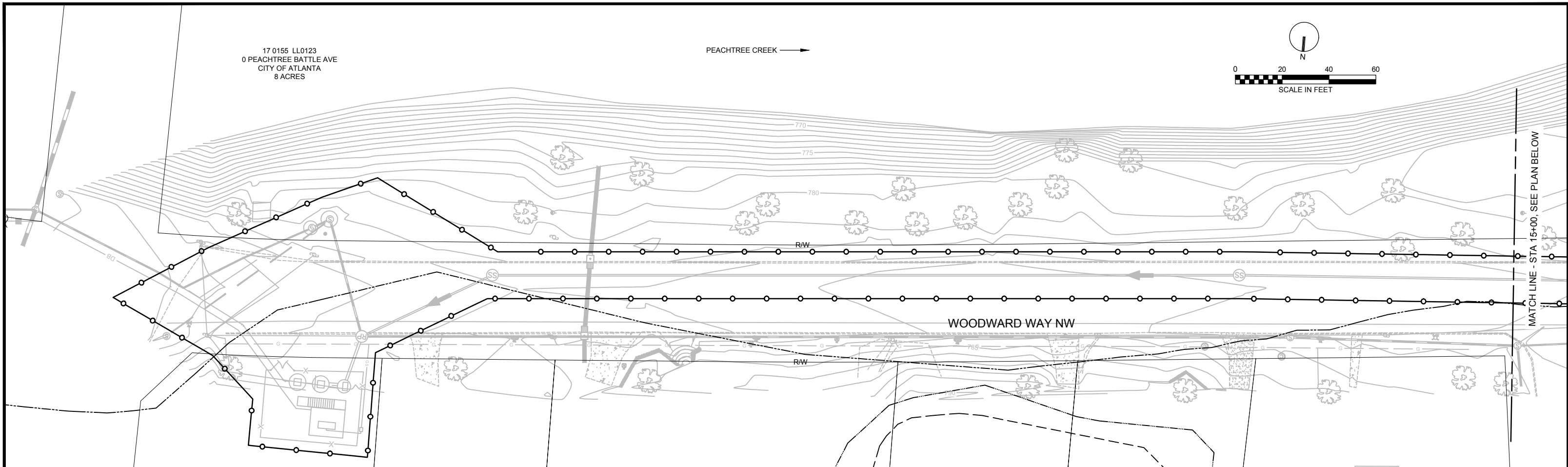
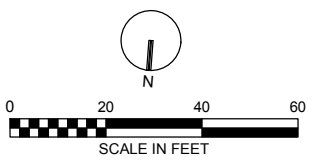
- | | |
|---|---|
| ---- | POINT OF WRESTED VEGETATION |
| ----- | 25' GAEPD UNDISTURBED BUFFER AS MEASURED FROM POINT OF WRESTED VEGETATION |
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				SURVEYOR		FIELD BOOKS		L.L. DIST.		COUNTY		SCALE	
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ENGINEER OF RECORD			PROJECT NUMBER:								SHEET OF 41		

17 0155 LL0123
0 PEACHTREE BATTLE AVE
CITY OF ATLANTA
8 ACRES

PEACHTREE CREEK →



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 3. CONTRACTOR SHALL INSTALL 4-FT ORANGE TREE PROTECTION FENCE OUTSIDE OF THE SILT FENCE ALONG THE ENTIRE LENGTH OF THE LIMITS OF CLEARING.

TREE REMOVAL LEGEND


2 TREE TO BE REMOVED



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Conservation Commission


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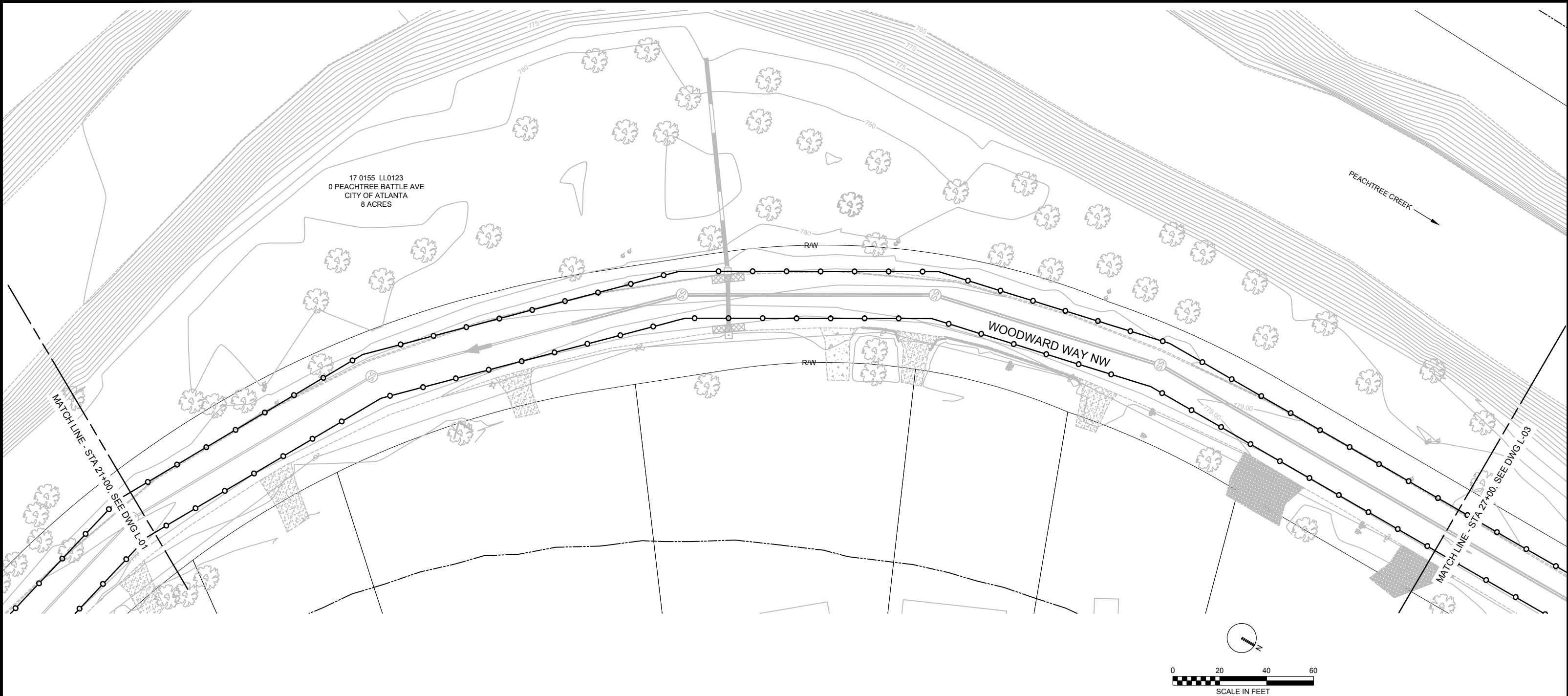
CITY OF ATLANTA
DEPARTMENT OF WATERSHED MANAGEMENT
OFFICE OF ENGINEERING SERVICES

WOODWARD WAY SEWER IMPROVEMENTS
TREE PROTECTION AND REMOVAL

SURVEYOR	FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE
DRAWN BY D CORBETT	DESIGNED BY T SMITH	CHECKED BY C HAMBLEN	APPROVED BY T KELLEY	DATE AUG 2017		

PROJECT NUMBER: 30 OF 41

100% REVIEW DOCUMENTS



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TREE REMOVAL LEGEND


 2 TREE TO BE REMOVED



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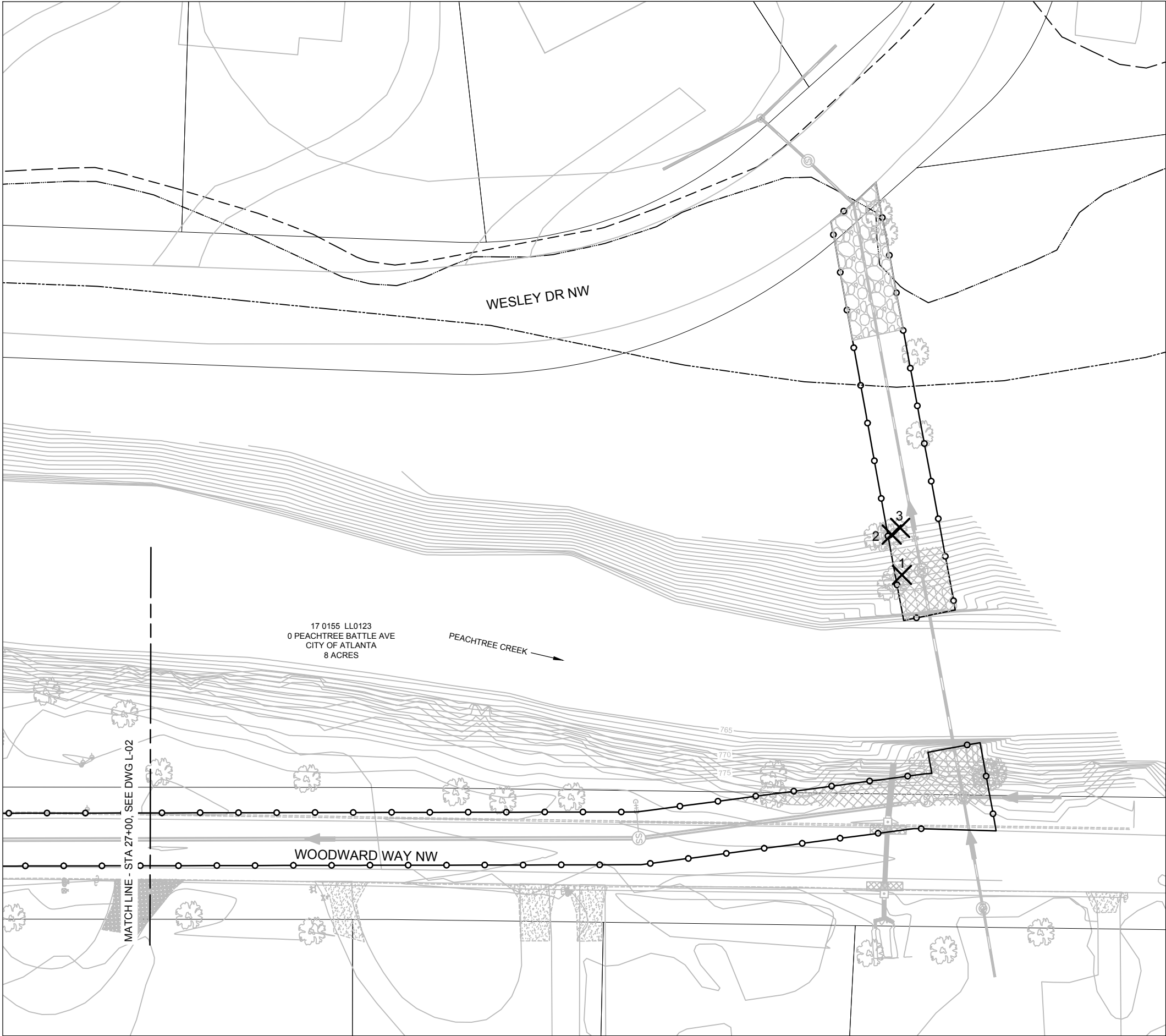
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	NO.	DATE	DESCRIPTION								
				WOODWARD WAY SEWER IMPROVEMENTS TREE PROTECTION AND REMOVAL							
				SURVEYOR		FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE
				DRAWN BY D CORBETT		DESIGNED BY T SMITH	CHECKED BY C HAMBLÉN		APPROVED BY T KELLEY	DATE AUG 2017	
ENGINEER OF RECORD			PROJECT NUMBER:						31	SHEET OF 41	

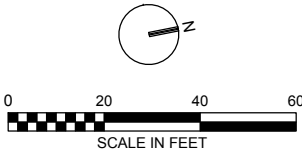


TREE REMOVAL TABLE

TREE NUMBER	LAT	LONG	DESCRIPTION
1	33.822868	-84.412598	12" HICKORY
2	33.82286	-84.41259	6" SWEETGUM
3	33.822867	-84.412539	12" HARDWOOD

CITY OF ATLANTA TREE ORDINANCE INFRASTRUCTURE RECOMPENSE*	
DISTURBED ACREAGE	1.19
RECOMPENSE PER DISTURBED ARCRE	\$5,000
RECOMPENSE COST	\$5,950

*per Sec 158-103.c.6



- GENERAL NOTES:
1. ALL SURVEY FOR THIS PROJECT, INCLUDING TREE LOCATION, WAS PROVIDED BY CITY OF ATLANTA.
 2. IT IS ANTICIPATED THAT ALL TREES INSIDE THE LIMITS OF DISTURBANCE WILL BE REMOVED AS PART OF NORMAL CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL CONSERVE TREES INSIDE THE LIMITS OF DISTURBANCE IF POSSIBLE. TREES ANTICIPATED FOR REMOVAL ARE LISTED IN THE TREE REMOVAL TABLE.
 3. CONTRACTOR SHALL INSTALL 4-FT ORANGE TREE PROTECTION FENCE OUTSIDE OF THE SILT FENCE ALONG THE ENTIRE LENGTH OF THE LIMITS OF CLEARING.

TREE REMOVAL LEGEND


 2 TREE TO BE REMOVED



Georgia Soil and Water
Conservation Commission


Christopher Hamblen
Level II Certified Design Professional

Certification Number: 0000069253 Expires: 08-21-2019
Issued: 08-21-2015



WW-L-03-676886.dwg

L-03



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REVISIONS

NO.	DATE	DESCRIPTION

CITY OF ATLANTA
DEPARTMENT OF WATERSHED MANAGEMENT
OFFICE OF ENGINEERING SERVICES

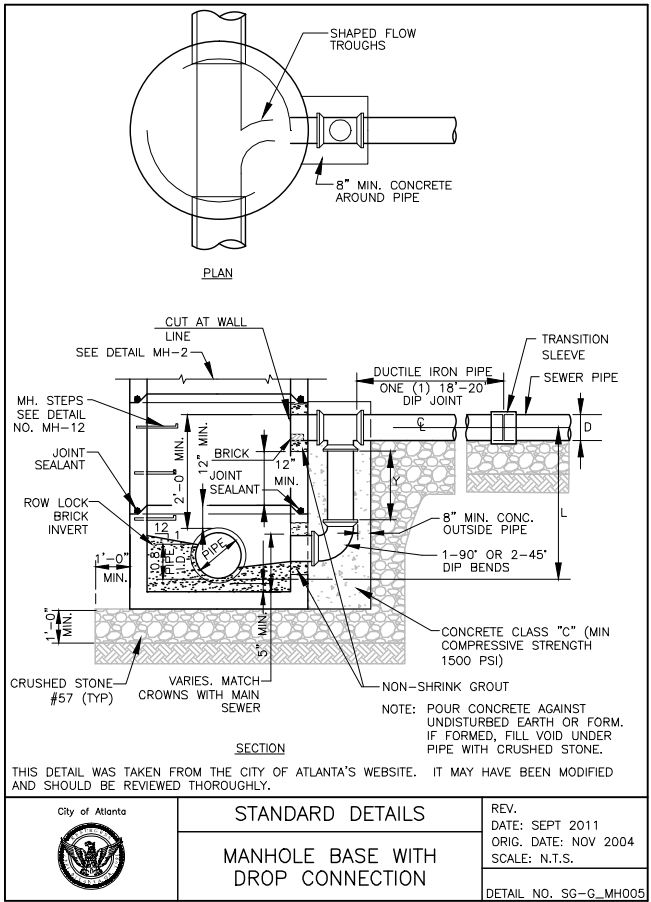
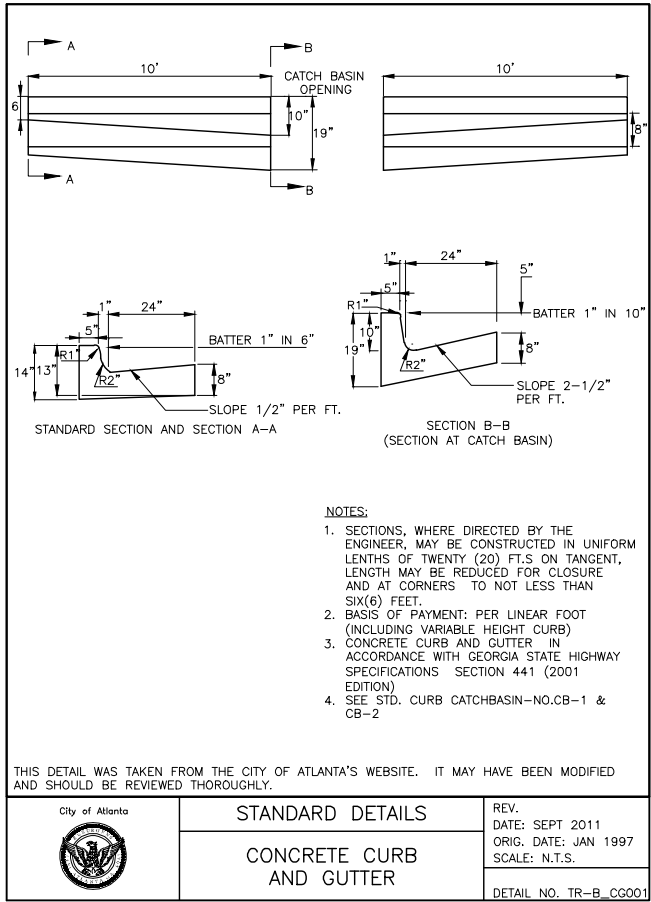
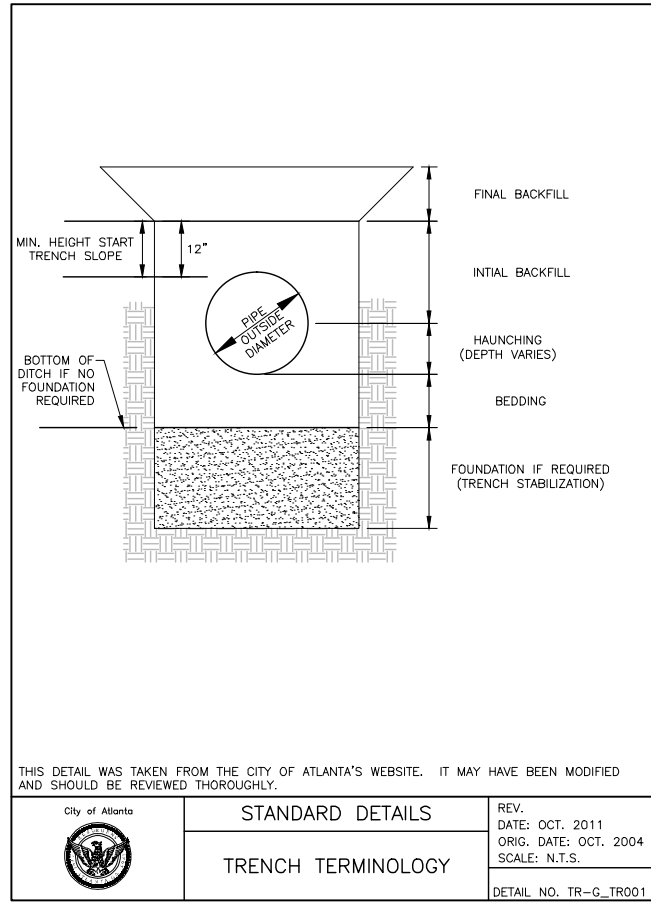
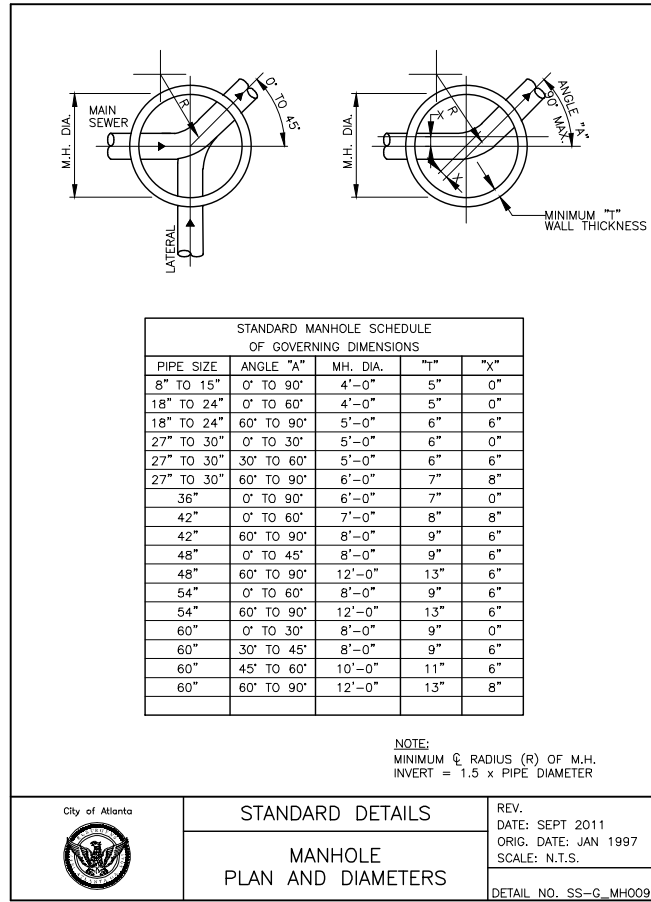
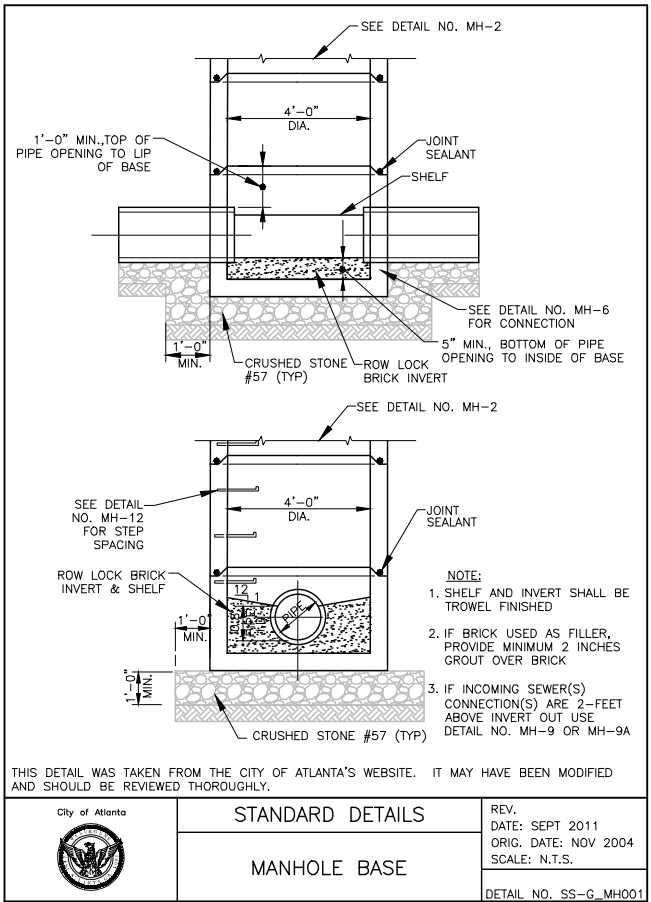
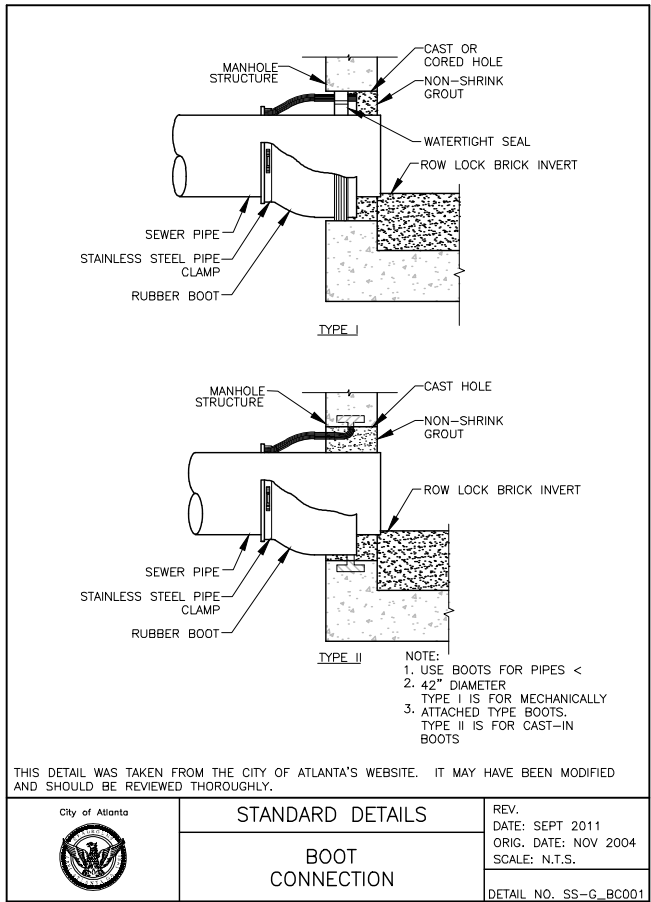
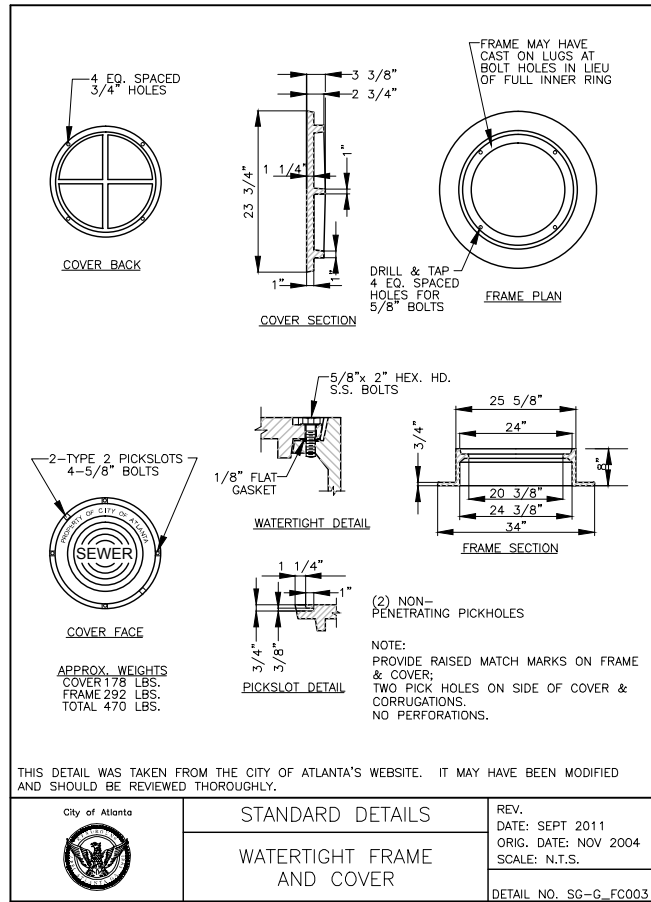
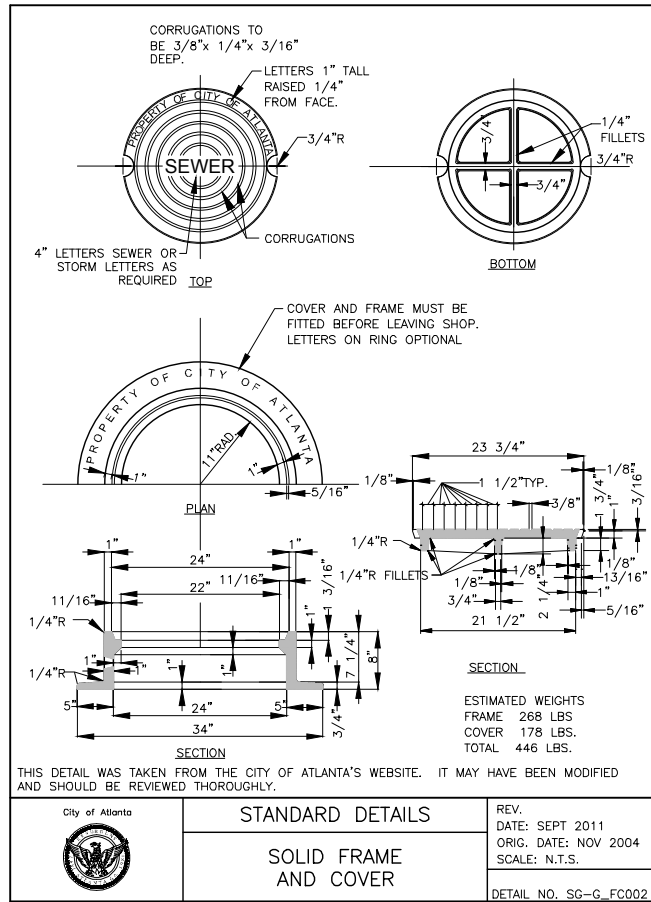
WOODWARD WAY SEWER IMPROVEMENTS
TREE PROTECTION AND REMOVAL

SURVEYOR	FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE
DRAWN BY D CORBETT	DESIGNED BY T SMITH	CHECKED BY C HAMBLEN	APPROVED BY T KELLEY	DATE AUG 2017		

PROJECT NUMBER:

SHEET 32 OF 41

ENGINEER OF RECORD



DROP CONNECTION TABLE

INCOMING SEWER SIZE, (D)	DROP SIZE REQUIRED, (L)	VERTICLE PIPE RUN, (Y1)	VERTICLE PIPE RUN, (Y2)	VERTICLE PIPE RUN, (Y3)	VERTICLE PIPE RUN, (Y4)
8"	24"	8.5"	N/A	6"	N/A
8"	30"	14.5"	9.5"	12"	7"
12"	36"	15.25"	8.25"	12"	5"
18"	48"	19"	9"	15"	5"
24"	60"	21"	9"	16"	N/A
30"	72"	25"	8.5"	22"	5.5"

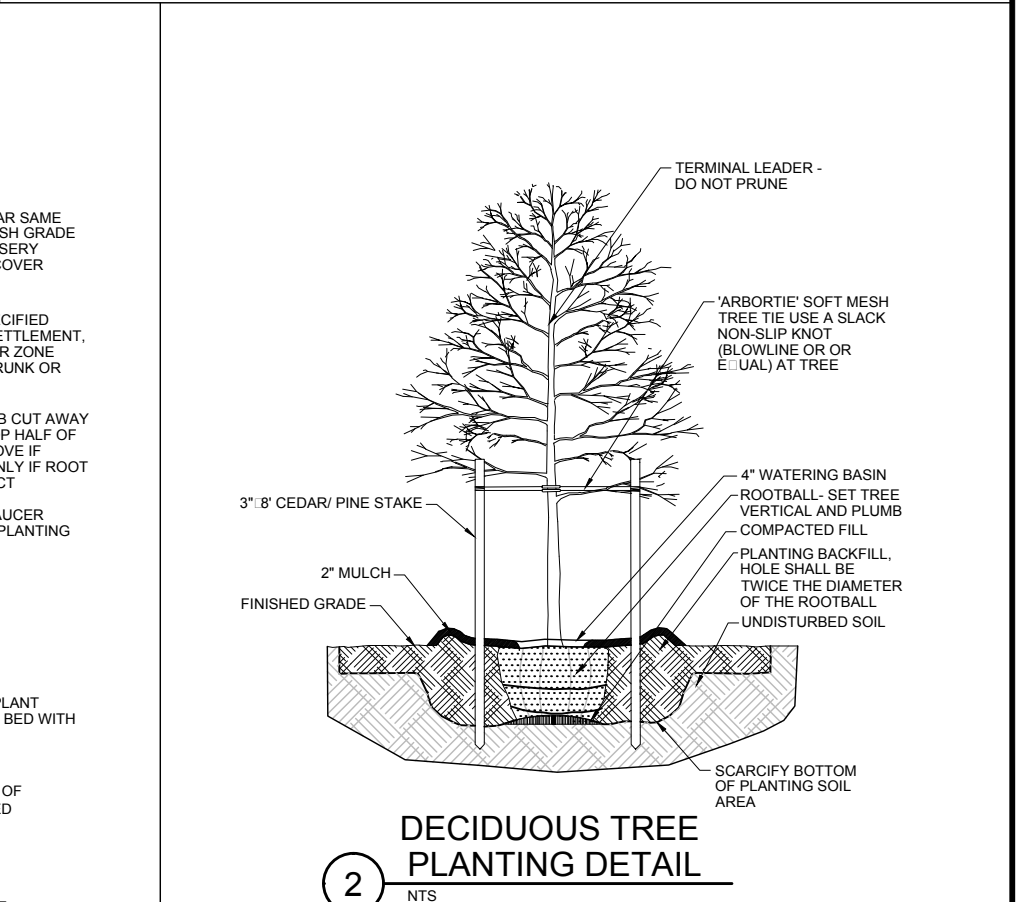
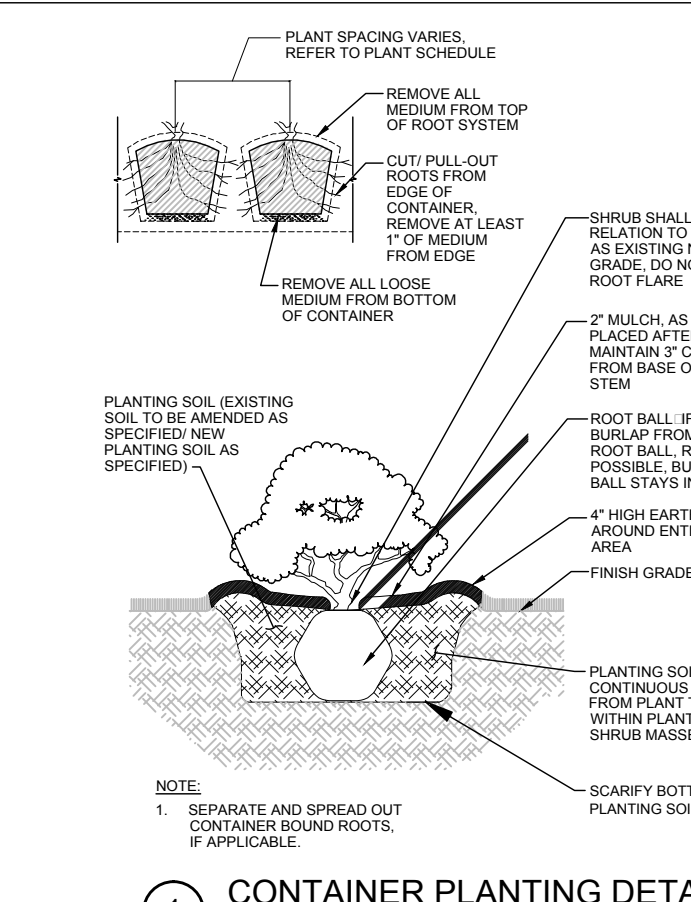
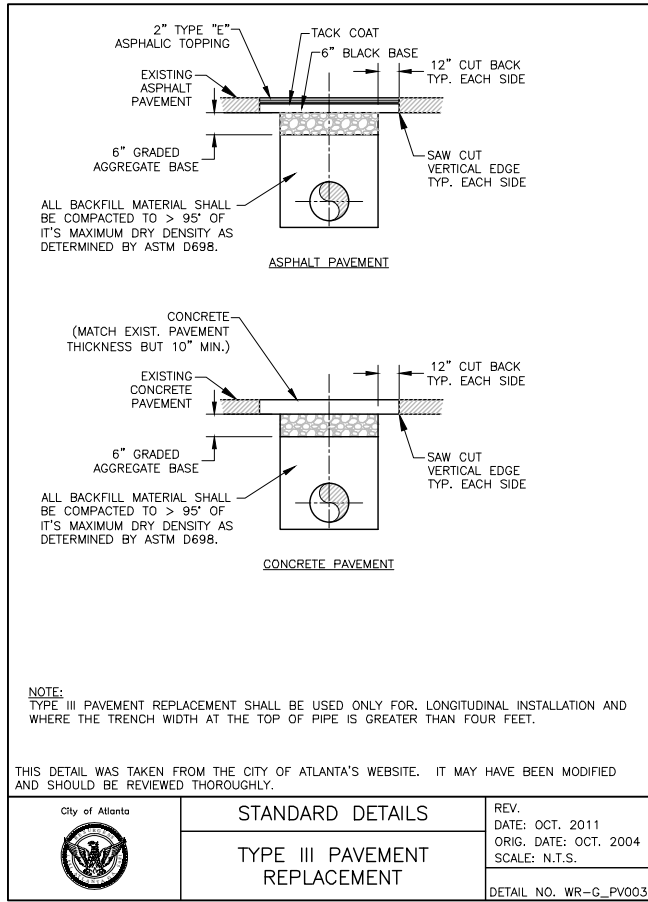
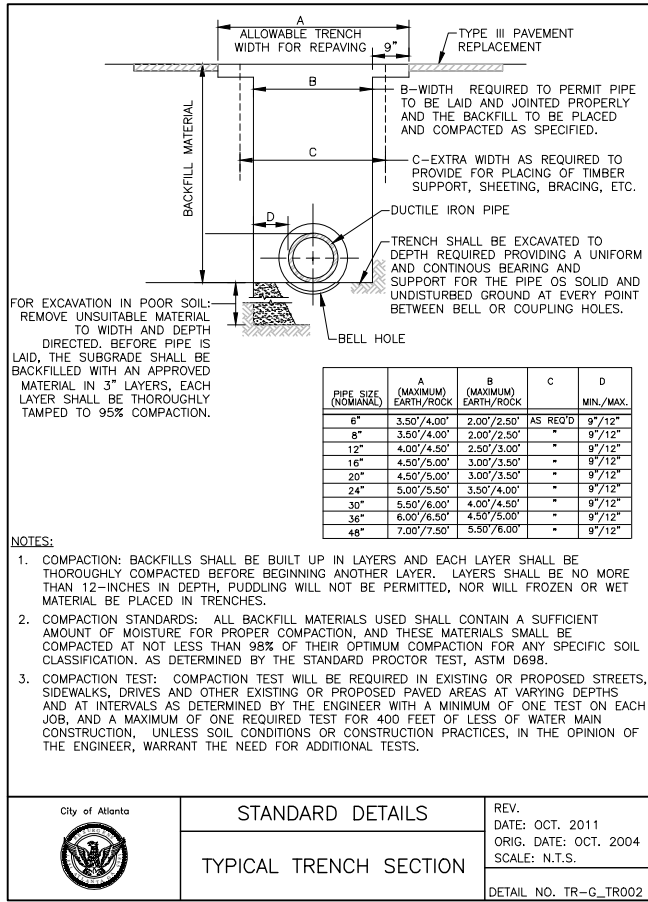
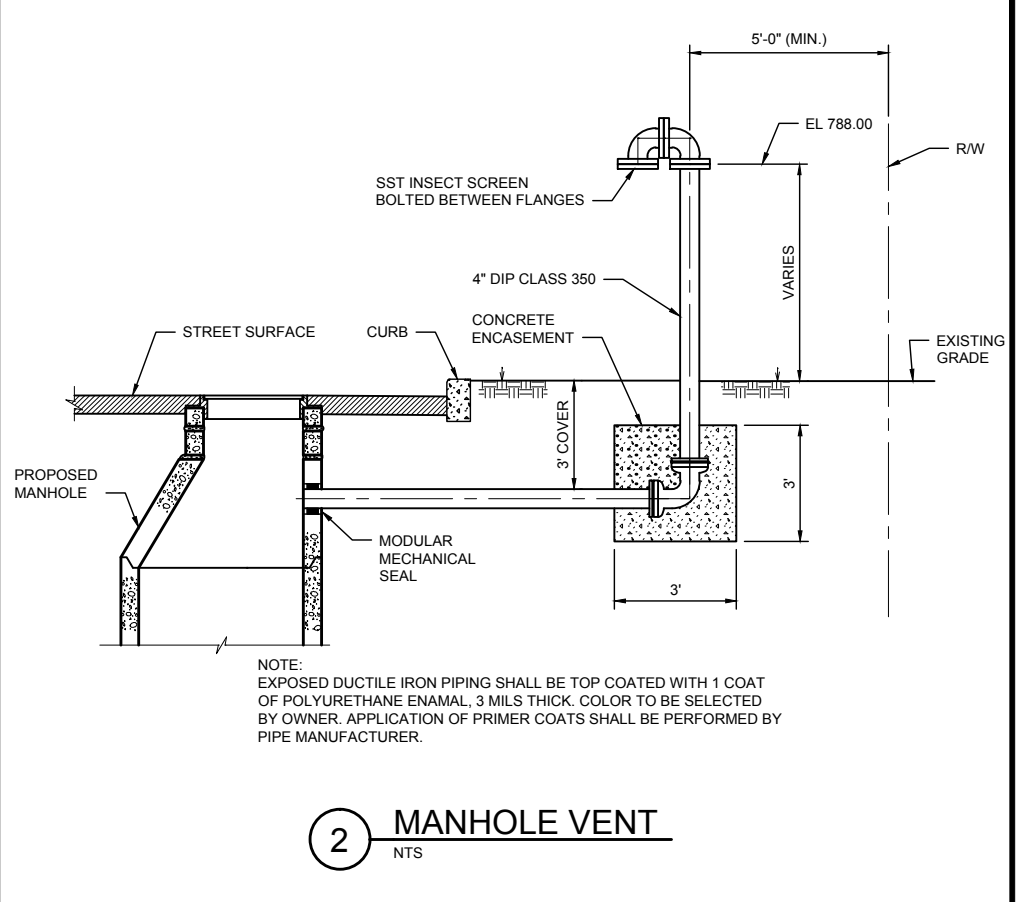
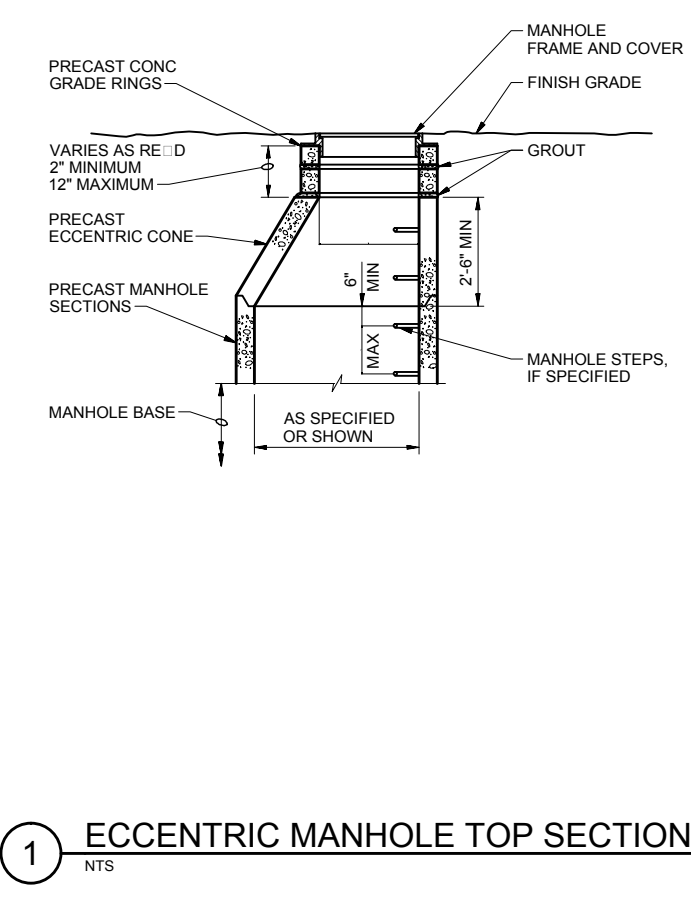
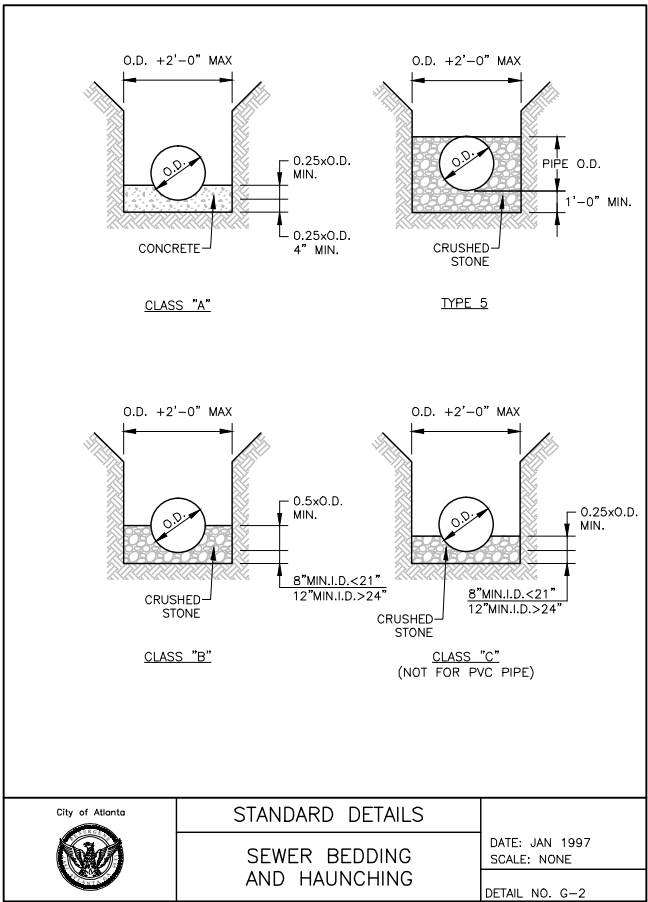
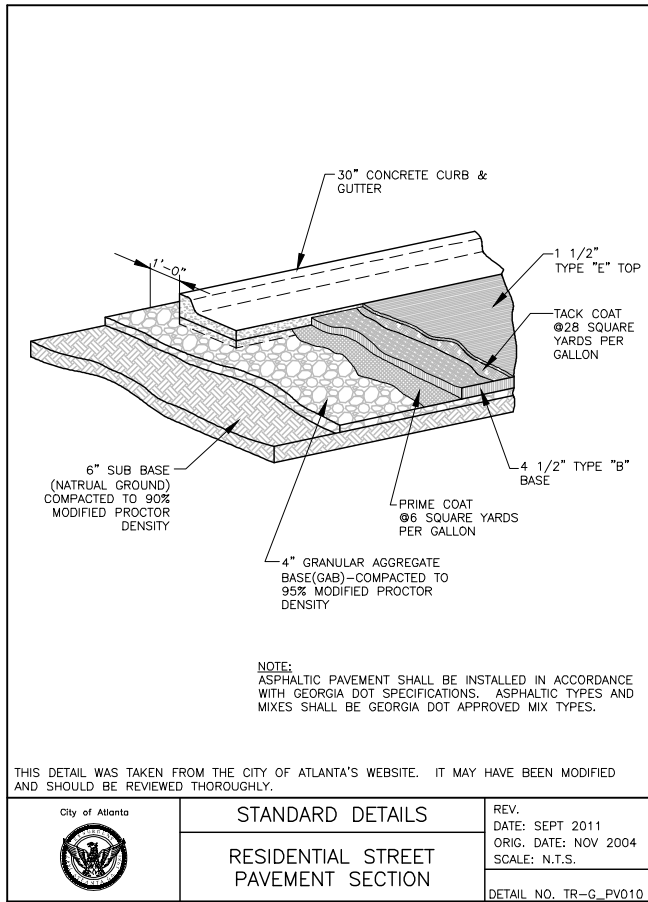
ch2m | **ROH&FOX**
a joint venture

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SD-01

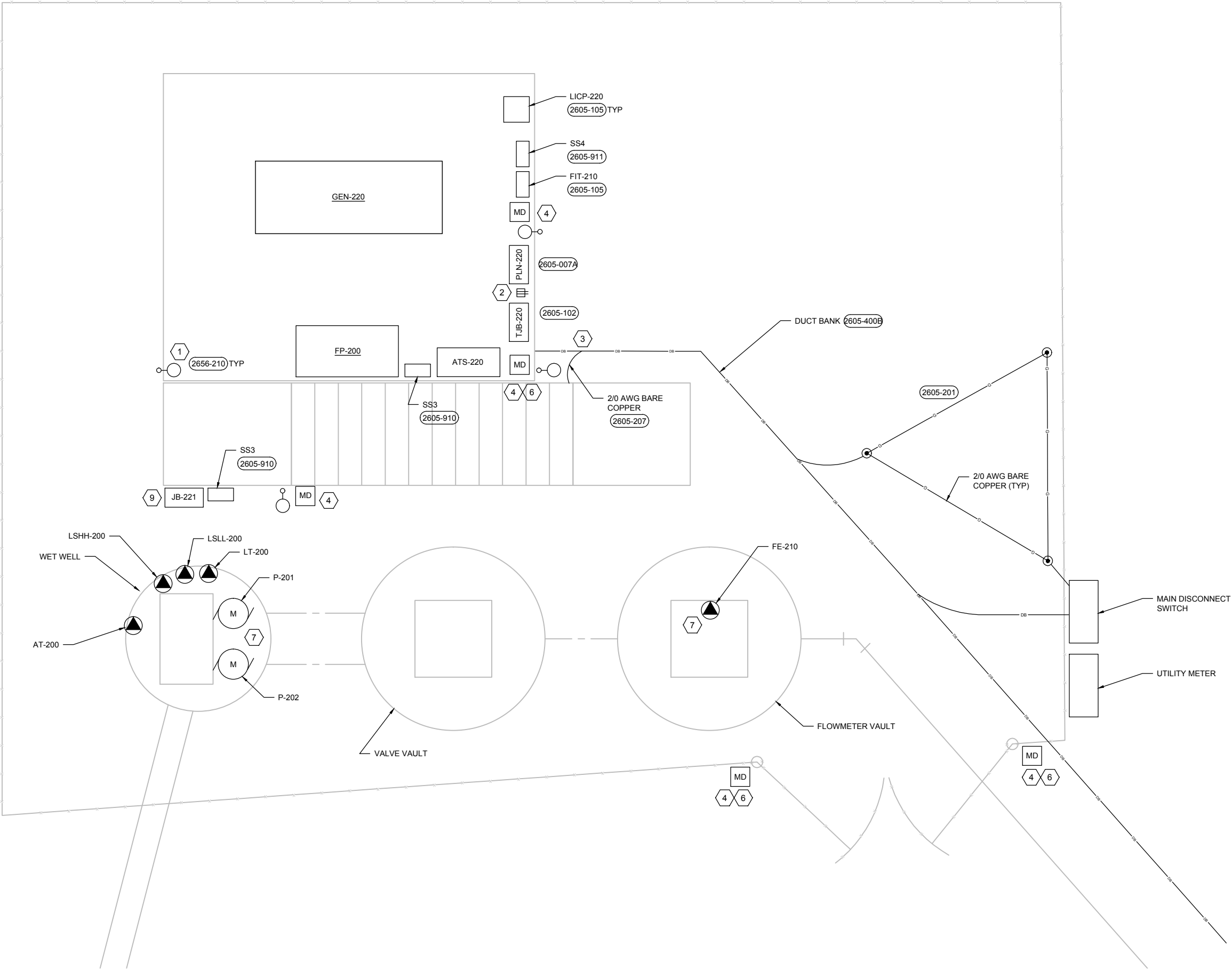
811
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	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES						
	NO.	DATE	DESCRIPTION							
				WOODWARD WAY SEWER IMPROVEMENTS STANDARD DETAILS						
				SURVEYOR		FIELD BOOKS	L.L. DIST.	COUNTY FULTON	SCALE NTS	
				DRAWN BY D CORBETT		DESIGNED BY J REYNOLDS	CHECKED BY A BYARD	APPROVED BY T KELLEY	DATE AUG 2017	
ENGINEER OF RECORD				PROJECT NUMBER:					33	SHEET OF 41



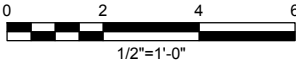
SHEET KEYNOTES

- HOLOPHASE LED LUMINAIRE: PSLED-PK1-MVOLT-WFL-40K-1-GYSDP-20KV-AO OR APPROVED EQUAL. SUPPLY ALL LUMINAIRES FROM LIGHTING CONTACTOR. USE IP1.
- GFCI RECEPTACLE, NEMA 20R, SERVED FROM PNL-220 CIRCUIT 12. USE IP1.
- BRING ALL SPARE CONDUITS TO 12 INCHES ABOVE GRADE AND CAP.
- MOTION SENSOR FOR LIGHTING CONTROL. LEGRAND WATTSTOPPER EW-200-120-G. MOUNT TO CAST J-BOX. WIRE TO LIGHTING CONTACTOR USING C2. SET TIME DELAY TO MAXIMUM.
- AIM MOTION SENSOR TOWARD BASE OF STAIRWAY. MOUNT USING 2605-006B.
- AIM MOTION SENSOR TOWARD CENTER OF DRIVEWAY. MOUNT TO WALL 8 FEET AFG.
- SEE AREA CLASSIFICATION DRAWING. USE WIRING METHODS IN ACCORDANCE WITH NEC ARTICLE 501.
- BOND TO DUCTBANK GROUND CONDUCTOR.
- MOUNT J-BOX (JB-221) TO STAIR LANDING SUPPORT COLUMN. FIELD WELD CHANNEL SUPPORTS TO COLUMN. PAINT WELD-DAMAGED FINISH WITH ZINC-RICH PAINT.



PUMP STATION ELECTRICAL PLAN

1/2" = 1'-0"

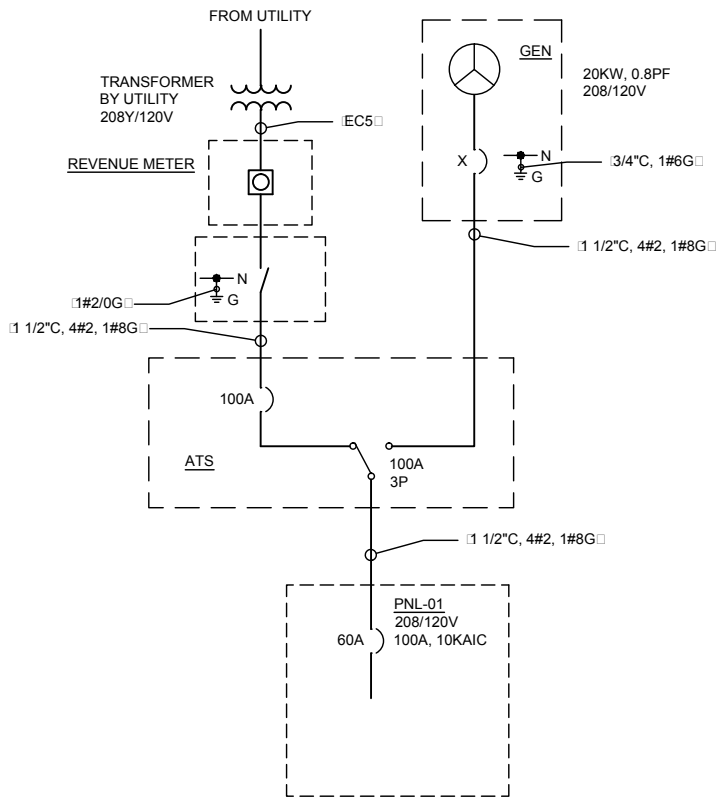


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E-01

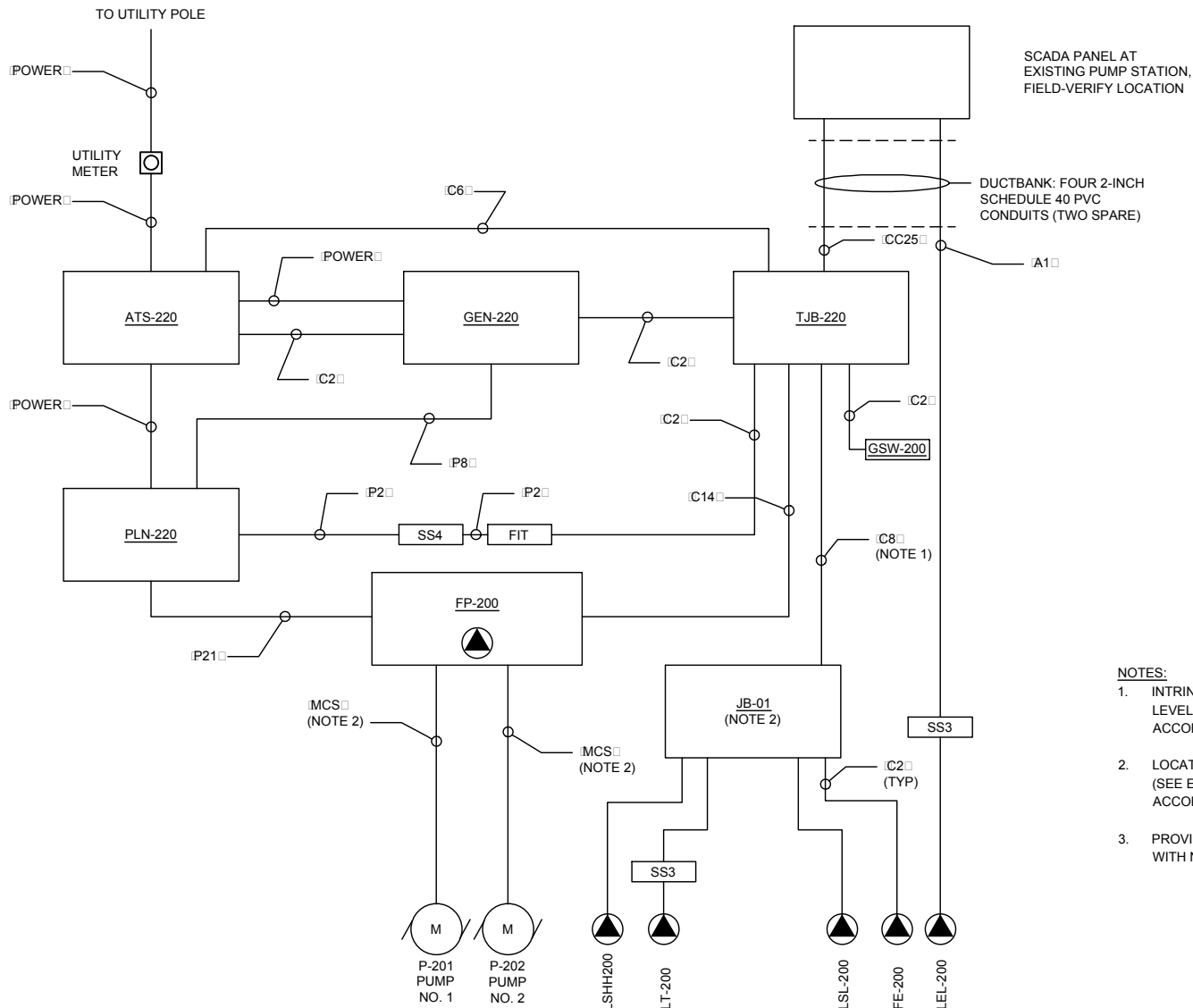


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	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES								
	NO.	DATE	DESCRIPTION									
				WOODWARD WAY SEWER IMPROVEMENTS PUMP STATION ELECTRICAL PLAN								
				SURVEYOR		FIELD BOOKS		L.L. DIST.		COUNTY FULTON		SCALE AS SHOWN
				DRAWN BY D CORBETT		DESIGNED BY J LANDMAN		CHECKED BY		APPROVED BY T KELLEY		DATE AUG 2017
ENGINEER OF RECORD				PROJECT NUMBER:							35	SHEET OF 41

ENGINEER OF RECORD



ONE LINE DIAGRAM
NTS



CABLE BLOCK DIAGRAM
NTS

- NOTES:
- INTRINSICALLY SAFE CIRCUITS FROM FP TO LEVEL SWITCHES IN WETWELL. INSTALL IN ACCORDANCE WITH NEC ARTICLE 504.
 - LOCATE JB-02 OUTSIDE CLASSIFIED LOCATIONS (SEE E-03). PROVIDE SEALING FITTINGS IN ACCORDANCE WITH NEC ARTICLE 501.
 - PROVIDE SEALING FITTINGS IN ACCORDANCE WITH NEC ARTICLE 501.

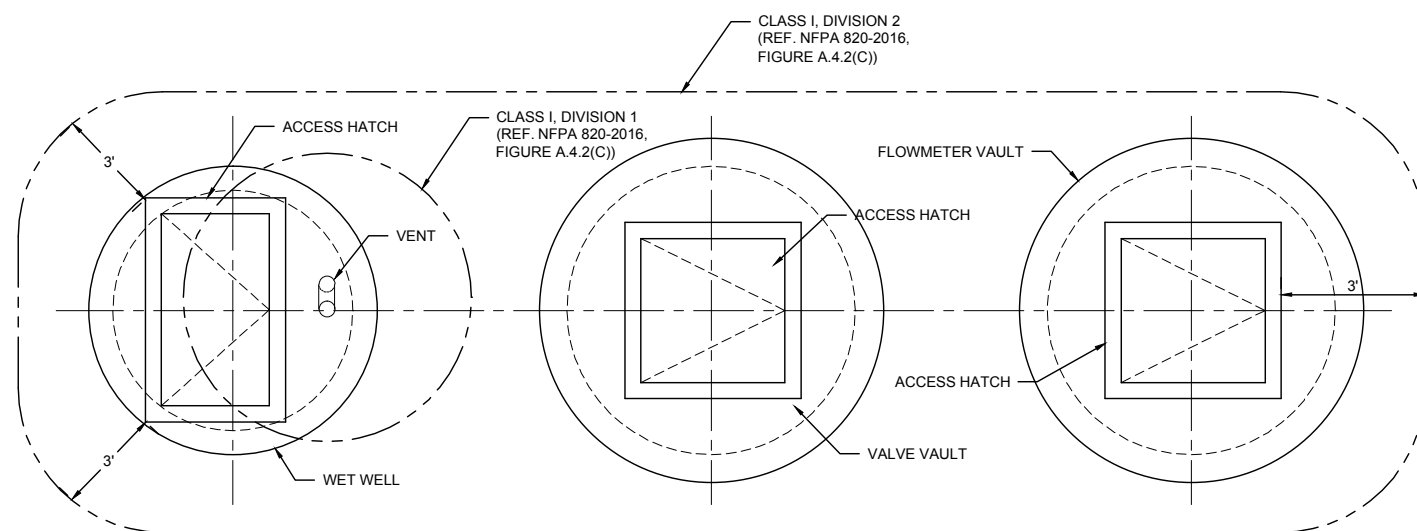
PANEL: PNL-220			LOCATION: PUMP STATION PLATFORM		
SERVICE VOLTAGE: 208Y/120V			PHASE: 3		
TOTAL LOAD KVA:			WIRE: 4		
REMARKS: NEMA 3R			BUS SIZE: 100A		
			MAIN SIZE: 100A		
			MOUNTING SURFACE		
			TYPE: BREAKER		
LOAD IN VA			BKR	CKT	CKT
A	B	C	NO.	NO.	NO.
4053.0				1	2
	4053.0			3	4
		4053.0		5	6
0.0				7	8
200.0				9	10
				11	12
0.0				13	14
	0.0			15	16
		150.0		17	18
0.0				19	20
	0.0			21	22
		0.0		23	24
4053.0	4253.0	4203.0	TOTAL		
			4803.0 5003.0 4763.0		

NOTE1: GFCI CIRCUIT BREAKER

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E-02

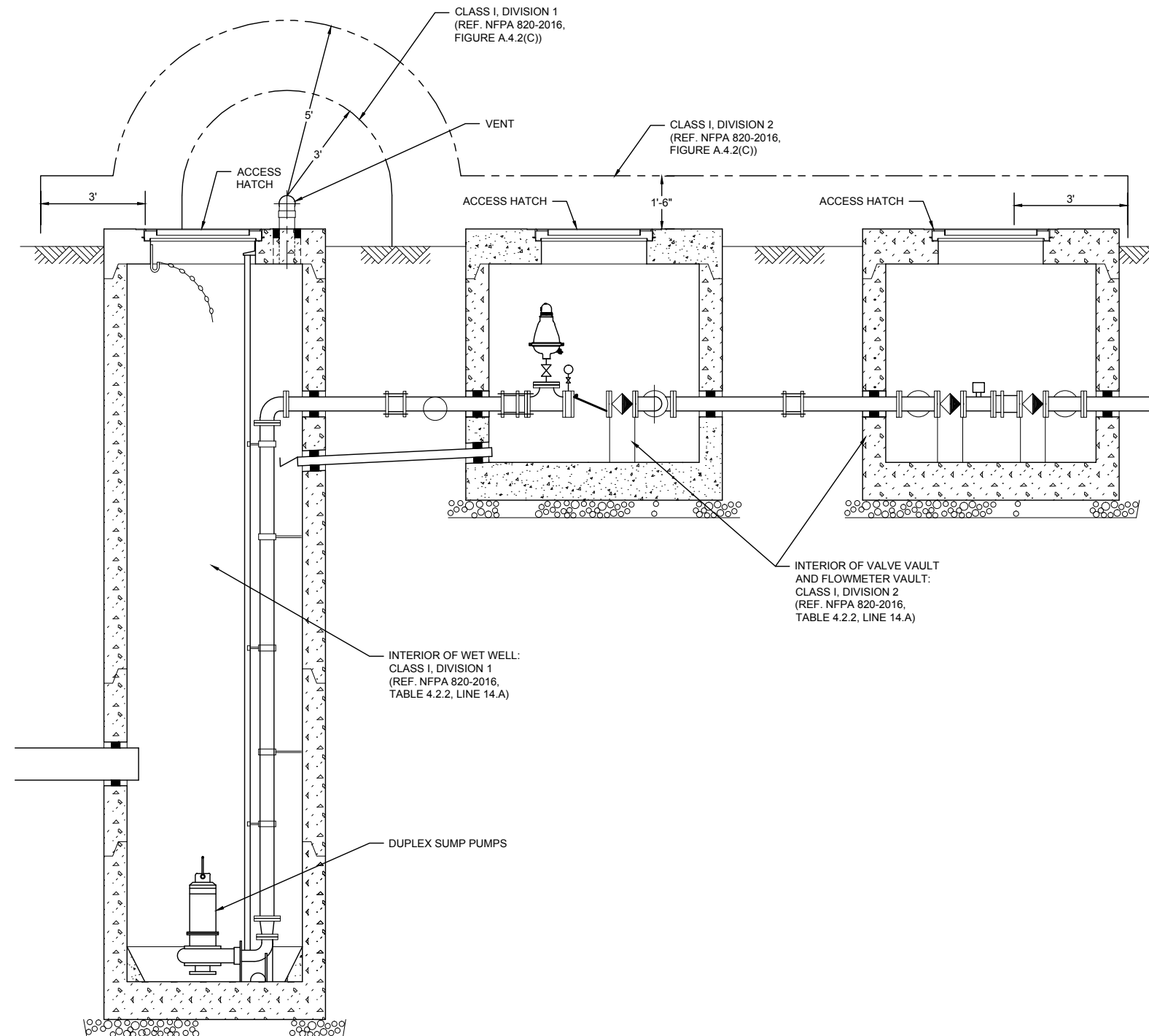
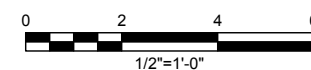


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	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES									
	NO.	DATE	DESCRIPTION										
				WOODWARD WAY SEWER IMPROVEMENTS ELECTRICAL DIAGRAMS AND SCHEDULES									
				SURVEYOR		FIELD BOOKS		L.L. DIST.		COUNTY		SCALE	
				DROWN BY D CORBETT		DESIGNED BY J LANDMAN		CHECKED BY		APPROVED BY T KELLEY		DATE AUG 2017	
				ENGINEER OF RECORD		PROJECT NUMBER:				SHEET OF 41			



NEW PUMP STATION AREA CLASSIFICATION

1/2" = 1'-0"



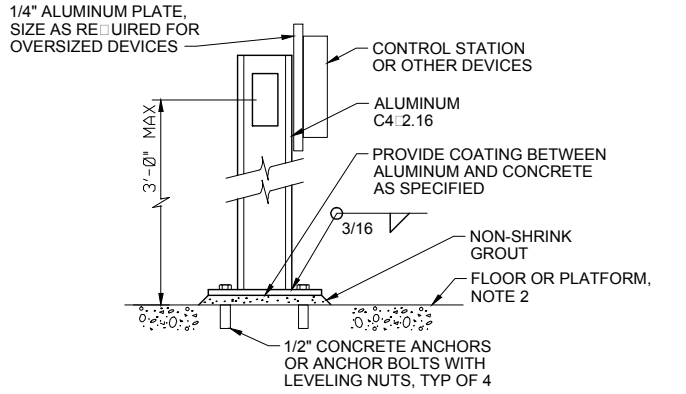
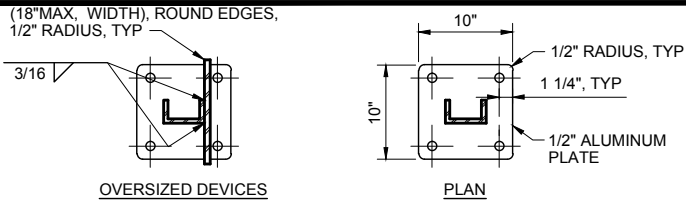
SECTION A

1/2" = 1'-0"

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E-03



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ENGINEER OF RECORD	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES						
	NO.	DATE	DESCRIPTION							
				WOODWARD WAY SEWER IMPROVEMENTS AREA CLASSIFICATION DIAGRAMS						
				SURVEYOR	FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE
									FULTON	AS SHOWN
				DRAWN BY D CORBETT	DESIGNED BY J LANDMAN	CHECKED BY		APPROVED BY T KELLEY	DATE AUG 2017	
PROJECT NUMBER:			SHEET 37 OF 41							

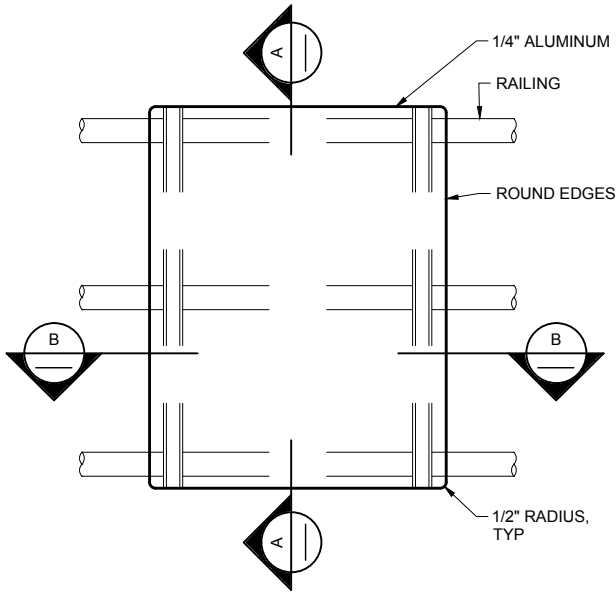


- NOTES:
- USE STAINLESS STEEL MOUNTING HARDWARE. USE WASHERS AND SPLIT-LOCK WASHERS UNDER ALL NUTS.
 - FOR YARD LOCATIONS, PROVIDE 2'-0" SQUARE 6" THICK CONCRETE PAD AT GRADE WITH 3#4 REBAR EACH WAY, CENTERED.
 - CONTROL STATIONS DEVICES AND EQUIPMENT HAVING A FRONTAL AREA NOT GREATER THAN 2'-0" SQUARE SHALL BE PEDESTAL MOUNTED UNLESS OTHERWISE INDICATED.

DEVICE MOUNTING, MOTOR CONTROL STATION

NTS

2605-005

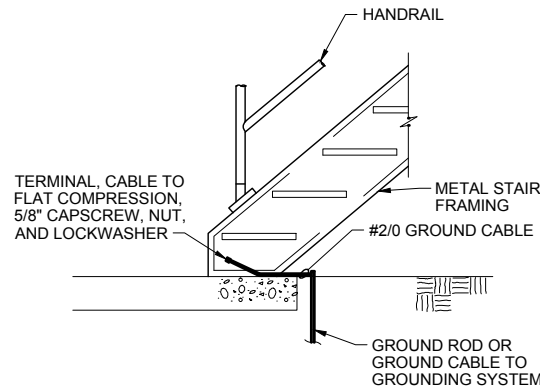
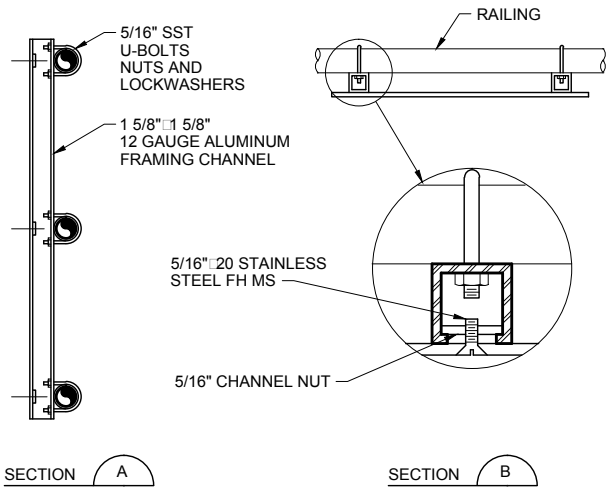


- NOTES:
- ALL HARDWARE SHALL BE STAINLESS STEEL. USE WASHERS AND SPLIT-LOCK WASHERS ON ALL NUTS AND BOLTS.
 - DIMENSIONS SHALL BE AS REQUIRED FOR EQUIPMENT TO BE MOUNTED. EDGE OF MOUNTING PLATE SHALL EXTEND A MINIMUM OF 2 INCHES EACH SIDE OF THE MOUNTED EQUIPMENT.
 - THIS DETAIL SHALL BE USED FOR MOUNTING EQUIPMENT AND JUNCTION BOXES WEIGHING LESS THAN 50 LBS ON RAILING WHETHER DETAIL IS CALLED OUT OR NOT. EQUIPMENT MOUNTING SHALL NOT REDUCE THE WIDTH OF A WALKWAY TO LESS THAN 3'-0".

DEVICE MOUNTING, RAILING MOUNTED EQUIPMENT SUPPORT

NTS

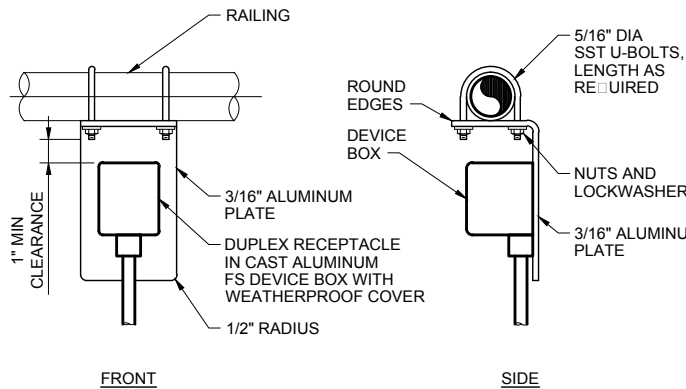
2605-007



GROUNDING, GENERAL STAIRWAY

NTS

2605-007

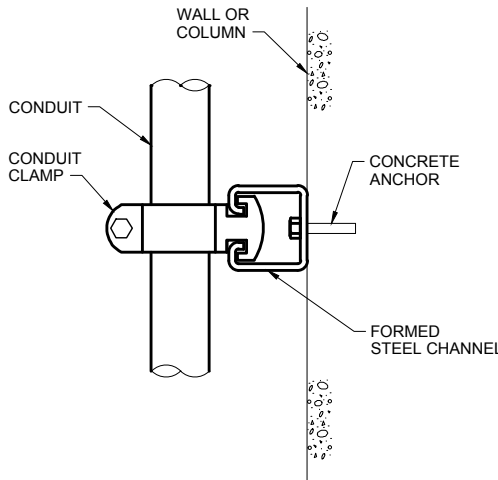


- NOTES:
- THIS DETAIL SHALL BE USED FOR MOUNTING OF ALL WIRING DEVICES AND JUNCTION BOXES 4 INCHES SQUARE AND LESS ON RAILING WHETHER DETAIL IS CALLED OUT OR NOT.
 - ALL HARDWARE TO BE STAINLESS STEEL. USE WASHER AND SPLIT LOCKWASHERS WITH ALL NUTS.
 - ALL EDGES AND THE ENDS OF ALL U-BOLTS WHICH HAVE BEEN CUT SHALL BE FILED SMOOTH.

DEVICE MOUNTING, ON RAILING

NTS

2605-006

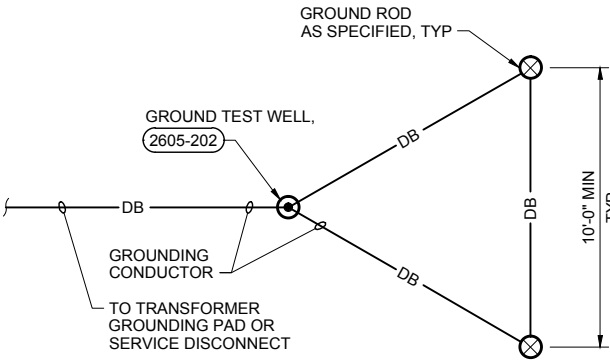


- NOTES:
- SUPPORT ALL EXPOSED CONDUITS ON FORMED STEEL CHANNELS.

CONDUIT SUPPORT ON STRUCTURE

NTS

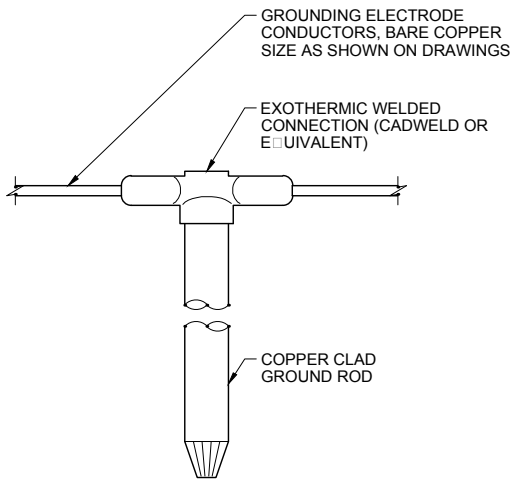
2605-017



GROUND TRIANGLE

NTS

2605-201



- NOTES:
- TOP OF GROUND ROD SHALL BE SAND BEDDED 6" MIN BELOW GRADE.
 - CONNECTIONS TO EXISTING GROUNDING ELECTRODE CONDUCTORS SHALL BE CADWELDED OR EQUIVALENT.

GROUND ROD CONNECTION

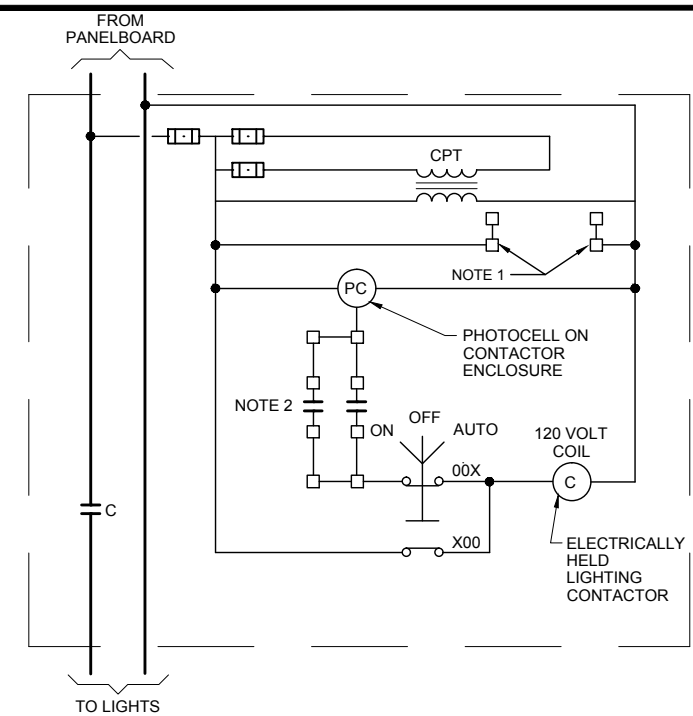
NTS

2605-235

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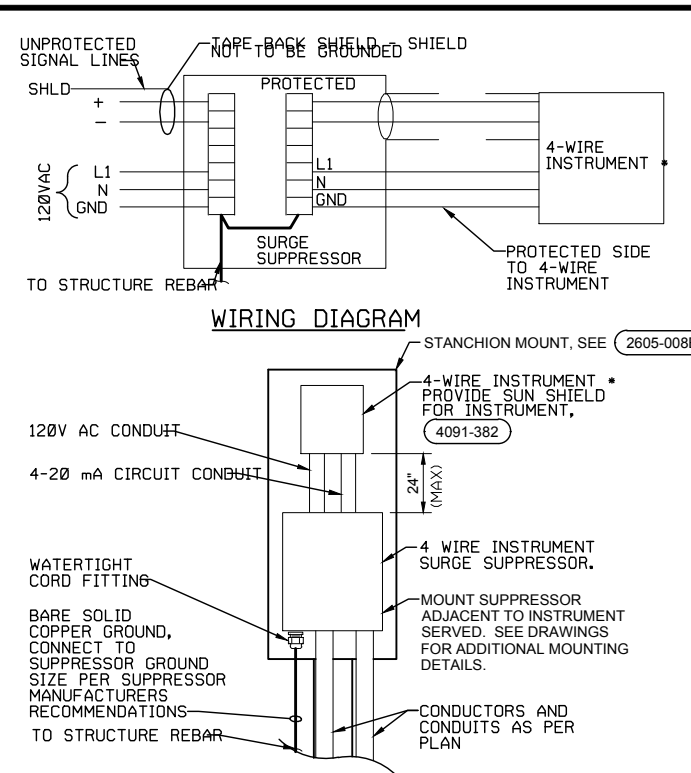


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	REVISIONS			CITY OF ATLANTA DEPARTMENT OF WATERSHED MANAGEMENT OFFICE OF ENGINEERING SERVICES					
	NO.	DATE	DESCRIPTION						
				WOODWARD WAY SEWER IMPROVEMENTS ELECTRICAL DETAILS 1					
				SURVEYOR	FIELD BOOKS	L.L.	DIST.	COUNTY FULTON	SCALE NTS
				DRAWN BY D CORBETT	DESIGNED BY J LANDMAN	CHECKED BY	APPROVED BY T KELLEY	DATE AUG 2017	
ENGINEER OF RECORD				PROJECT NUMBER:					38 SHEET OF 41



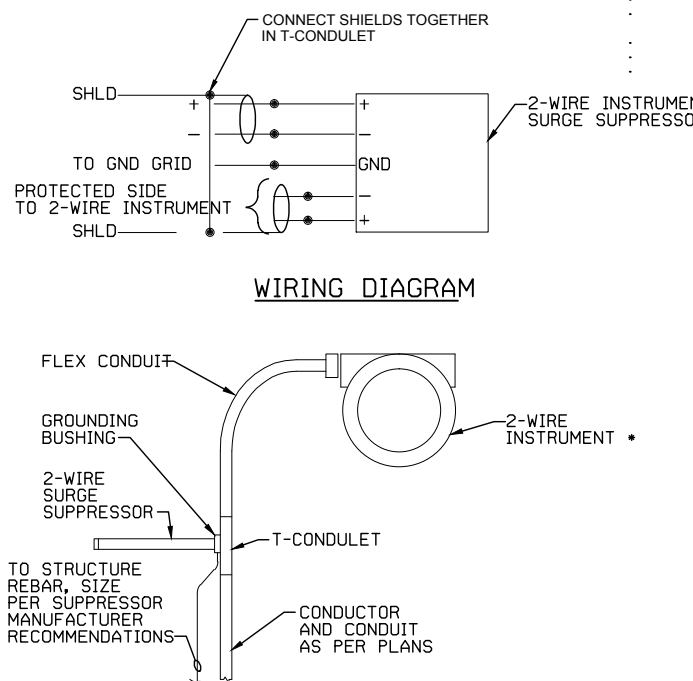
- NOTES:
1. PROVIDE TERMINALS FOR POWER TO MOTION SENSORS (IF USED).
 2. PROVIDE TERMINALS FOR MOTION SENSOR SWITCH CONTACTS. IF NOT USED, JUMPER ONE SET OF TERMINALS.
 3. EQUIPMENT GROUND CONDUCTOR CONNECTIONS NOT SHOWN HERE FOR CLARITY.

120V LIGHTING CONTACTOR CONTROL
NTS
2650-105



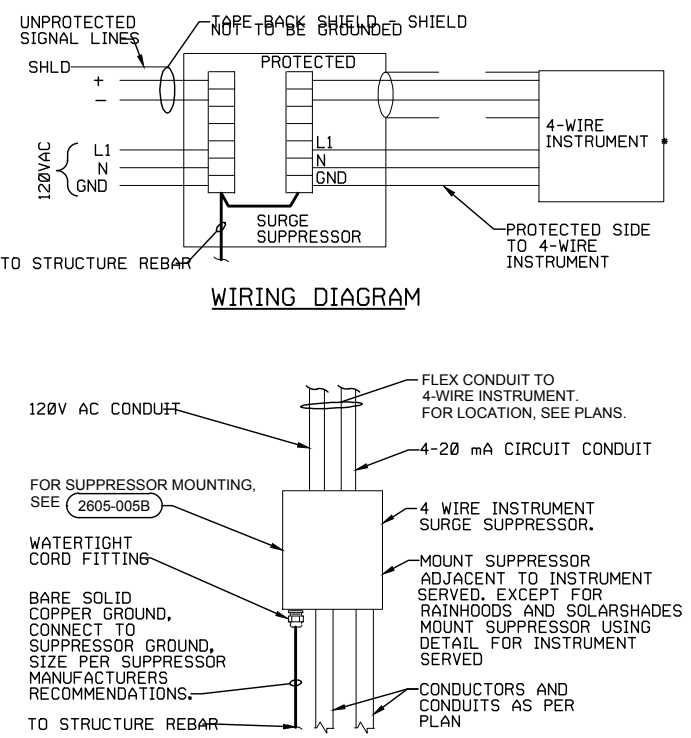
- NOTES:
1. INDICATES EQUIPMENT SPECIFIED AND PROVIDED BY SPECIFICATION SECTION 40.91.00.

**SURGE SUPPRESSOR
INSTALLATION 4-WIRE INSTRUMENT
MOUNTED OUTDOORS**
NTS
2605-911A



- NOTES:
1. INDICATES EQUIPMENT SPECIFIED AND PROVIDED BY SPECIFICATION SECTION 40.91.00.

**SURGE SUPPRESSOR
INSTALLATION 2-WIRE INSTRUMENT
MOUNTED OUTDOORS**
NTS
2605-910



- NOTES:
1. INDICATES EQUIPMENT SPECIFIED AND PROVIDED BY SPECIFICATION SECTION 40.91.00.

**SURGE SUPPRESSOR
INSTALLATION 4-WIRE INSTRUMENT
MOUNTED OUTDOORS**
NTS
2605-911B

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WOODWARD WAY SEWER IMPROVEMENTS ELECTRICAL DETAILS 3									
SURVEYOR		FIELD	BOOKS	L.L.	DIST.	COUNTY	SCALE	DATE	
D CORBETT		DESIGNED BY	J LANDMAN	CHECKED BY		APPROVED BY	T KELLEY	AUG 2017	
PROJECT NUMBER:								SHEET	41
ENGINEER OF RECORD								40	OF

